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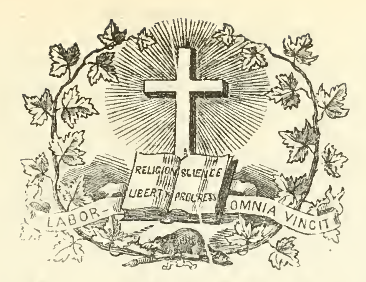
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LITERATURE.

POETRY.

JACQUES CARTIER.

BY THE HON. T. D. M'GEE.

In the sea-port of St. Malo, 'twas a smiling morn in May,
When the Commodore Jacques Cartier to the westward sailed away;
In the crowded old cathedral all the town were on their knees
For the safe return of kinsmen from undiscovered seas;
And every autumn blast that swept o'er pinnacle and pier
Filled manly hearts with sorrow, and gentle hearts with fear.

A year passed o'er St. Malo—again came round the day
When the Commodore Jacques Cartier to the westward sailed away;
But no tidings from the absent had come the way they went,
And tearful were the vigils that many a maiden spent;
And manly hearts were filled with gloom, and gentle hearts with fear,
When no tidings came from Cartier at the closing of the year.

But the earth is as the Future, it hath its hidden side,
And the Captain of St. Malo was rejoicing in his pride
In the forests of the North—while his townsmen mourned his loss,
He was rearing on Mount-Royal the *fleur-de-lis* and cross;
And when two months were over, and added to the year,
St. Malo hailed him home again, cheer answering to cheer.

He told them of a region, hard, iron-bound, and cold,
Nor seas of pearls abounded, nor mines of shining gold;
Where the wind from Thule freezes the word upon the lip,
And the ice in spring comes sailing athwart the early ship.
He told them of the frozen scene until they thrill'd with fear,
And piled fresh fuel on the hearth to make them better cheer.

But when he chang'd the strain—he told how soon is cast
In early spring the fetters that hold the waters fast;
How the winter causeway broken is drifted out to sea,
And the rills and rivers sing with pride the anthem of the free;
How the magic wand of summer clad the landscape to the eyes,
Like the dry bones of the just, when they wake in Paradise.

He told them of the Algonquin braves—the hunters of the wild,
Of how the Indian mother in the forest rocks her infant child;
Of how, poor souls, they fancy in every living thing
A spirit good or evil that claims their worshipping;
Of how they brought their sick and maimed for him to breathe upon,
And of the wonders wrought for them through the Gospel of St. John.

He told them of the river, whose mighty current gave
Its freshness for a hundred leagues to ocean's briny wave.
He told them of the glorious scene presented to his sight,
What time he reared the cross and crown on Hochelaga's height,
And of the fortress cliff that keeps of Canada the key,
And they welcomed back Jacques Cartier from perils over sea.

CANADIAN HISTORY.

Jacques Cartier.

The reverence of Canada, and the respect of France, have of late invested with a new interest the mariner of St. Malo, who gave a name to the St. Lawrence, which he ascended to its rapids. He stands forward, indeed, as a man of high principle, sound judgement, adventurous enterprise, and tarnished only by his unjust carrying off of the Canadian chiefs to France. But even in this there was not the incentive of gain; he did not take them to make them slaves, as Leon Ayllon, and other Spanish adventurers did. If Cartier did not return with them as he proposed, we know not what obstacles prevented him, but we do know that there is nothing but what tends to show that the Americains were to their latest breath treated with kindness and as free men.

Antiquarian research tells us that his grandfather, John Cartier, was born in 1428, married Guillemette Baudoin in November, 1457, and had five sons, all of whom are represented in our day. The eldest of these, Jacques or James Cartier, born at St. Malo, Dec. 4, 1458, married Geseline Jansart, and had three sons, the youngest of whom, named after himself, made the name famous at home and abroad, and is one of the glories of that old French town.

Jacques Cartier was born in December, 1494, propably on the last day of the year, when he was carried to the church of St. Malo to receive baptism. Men had but for a twelvemonth wondered then over the discovery of that New World to which his name was to be indissolubly connected. Of his early life we find few traces. In 1518, he appears on the parish register as godfather of a cousin, and the next year leads to the altar (May 2, 1519) Marie Katherine des Granches, daughter of Monsieur Honoré des Granches, knight and constable of St. Malo. Young Cartier had already, it would seem, made his mark.

His marriage was a brilliant one, and he must have stood well in the world's esteem to have won a maiden so well connected, but Cartier was already at the age of 28, master pilot of the port of St. Malo.

Of his wanderings on the Ocean during his earlier years we know nothing, although there are indications that he had visited the coast of America prior to his expedition in 1534. He had in all probability often cast his lines, with the hardy fishermen of northern France, amid the cod that swarmed on the banks of Newfoundland, and was selected for his enterprise by Philippe de Chabot, the Admiral of France, to conduct the exploring expedition sent out by Francis I. in 1534.

Ten years had now elapsed since the voyage of Verrazzano, and while Spain had been rapidly extending her power in the New World, France had in no way availed herself of the discoveries made under her flag. Yet she had explored, and might claim as her own, a port at which the commerce of the new-found continent was one day to centre, and where in less than three centuries a city rivalling in population the greatest in the world was to exert on the globe its influence. France was represented on the western side of the Atlantic only by her hardy fishermen of Britanny and Normandy, no doubt the earliest discovers of the continent, whose labors found no chronicler.

It was indeed time for France to act, but the expedition planned by Chabot disregarded the information acquired by Verrazzano, if we are indeed to regard the account of that Florentine's voyage as real. It was not to settle in NewYork bay or establish a trading post or colony there ; nor was it to explore the country to the north or south for a better location. It was simply to discover a nothern passage to China and Japan—to seek what Sir John Franklin has perished in search of in our day.

Had France but followed up her previous discoveries, by settling the Bay of NewYork, and then occupied the St. Lawrence and the country of the Abnakis, how different would the world's history have been !

The French expedition of 1534, under Jacques Cartier, consisted of two vessels of sixty tons each, and carried sixty-one men in all. Cartier sailed from St. Malo on the 30th of April, and on the 10th of May made Cape Bonavista, but finding too much ice there, ran into Catalina, which has changed into Spanish the French name of the saint he gave it. He then coasted along Newfoundland to the Straits of Belleisle, visited the port of Brador, and the bay of Brest, from which he proceeded in boats to Checateca. Returning to Newfoundland, he made the isles of Brion and Magdelaine, and on the 3rd of July entered a bay which still bears the name given by Cartier in consequence of the excessive heat. Proceeding next to Gaspé Bay, he planted a cross among the Micmacs on the 24th of July, and taking two of the natives on board, Taiguragny and Domagaya, sons of the chief, at last, though without being aware of it, entered one of the arms of the St. Lawrence. After visiting the isle Natiscotec, or Anticosti, Mont Joly and the river Nataskouan, he sailed back, reaching St. Malo on the 5th of September, after experiencing a severe storm.

Of this voyage of Cartier, no contemporary French account is known. Ramusio in 1556, published an Italian version of a narrative in his hands, and this account, re-translated into French, was printed at Rouen in 1598.

This voyage had added little to the knowledge already acquired from the fishermen whom he found at almost every point, still it added to the fame of Cartier and won him favor.

Charles de Mouz, Sieur de la Melleraye, Vice-Admiral of France, took the matter of American discovery to heart. A commission was issued to Cartier on the 31st of October, 1534, styling him Captain and MasterPilot of St. Malo, " to lead,conduct and employ three vessels, each equipped and provisioned for fifteen months, to conclude the voyage already by him begun to discover beyond the Newfoundlands." His three vessels—the Grande Hermine of 120 tons, the Petite Hermine of 60 tons (commanded by his brother-in-law Macé Jalobert), and the Emerillon of 40 tons—were ready in May, 1535. On the 16th of that month, the feast of Whitsunday, Cartier and his companions, after approaching the sacrements reverently in the Cathedral of St. Malo, received the episcopal benediction of Francis Bohier, Bishop of St. Malo and on the 19th set sail, bearing back the two Micmac youth. On the 26th of July they reached Blanc Sablon in the straits of Belleisle, after having been scattered by a storm. Pushing on his explorations, Cartier entered St. Genevieve Bay on the 7th of August, Anticosti on the 15th, and by the 1st of September, was at the mouth of the deep Saguenay. Still ascending the St. Lawrence he came to the St. Charles to which from the day of its discovery he gave the name of St. Croix. Here, on the site of modern Quebec, between Fabrique Street and the Coteau St. Genevieve, then stood the bark village of Stadaconé, the town of Donnacona, with its fields of maize and squashes. Like all the tribes below them, the people were apparently Montagnais, for the Micmacs of Gaspé served as interpreters.

After cultivating friendly relations here, Cartier, leaving the Great and little Hermine laid up, ascended the river in the Emerillon, in spite of the efforts of Donnacona and the people of Stadaconé to deter him. At La Pointe du Platon, the present St. Croix, fifteen leagues above Quebec, he found the Village of Achelaiy, or Ochelai, and leaving the Emerillon at the mouth of the Sorel he continued his exploration in boats, arriving on the 2nd October at Hochelaga, a palisaded town at the foot of the Mountain of Montreal. The inhabitants were evidently a different family from the Algonquins below : the town as described by Cartier, their sedentary life, the words of their language which he has preserved, all show them to be of that Huron Iroquois family who everywhere ruled the Algonquins. The chief styled Agouhanna (evidently the Agoyander of later writers), with his people, received Cartier and his Companions with every mark of friendship.

From the mountain Cartier gazed with delight on the panaroma before him, and exulted to learn that above the rapids the navigation extended for a three moons' journey to a land of glittering metal.

Reëmbarking in his boats, he returned to the Emerillon, and looking in at the St. Maurice, returned to Stadaconé. Here his party had erected a palisade and planted cannon, making it strong enough to resist all Canada. They now prepared to winter there, but scurvy soon broke out and the men died rapidly. In vain public devotions were performed, and a pilgrimage vowed to Our Lady of Roc Amadour. Not till an Indian remedy was tried did the evil stay.

In the spring, taking by stratagem Donnacona and several of his chiefs, and leaving the little Hermine (which he could no longer man) Cartier sailed from Quebec May 6, 1536, and by the 16th of July reached St. Malo.

Of his second voyage, an account addressed to the king was printed at Paris in 1545, and has been reprinted this year in the same city by M. d'Avezac, who has collated it with three manuscripts in the Imperial Library, by which means he has fortunately added considerably to the already valuable vocabulary given by Cartier as the " Language of the countries and kingdoms of Hochelaga and Canada," but which seems to be mainly of Hochelaga, many of the words being unmistakably Iroquois, and few recognizable as belonging to any of the numerous Algonquin dialects.

Cartier was not able at once to return and plant a colony. The Indians remained in France, were baptized March 25, 1538, and finally died in their exile. Thevet, the cosmographer, records his frequent interviews with Donnacona, who died soon after, four or five years subsequent to his arrival in France.

In 1540, Francis I. commissioned Francis de la Rocque, Sieur de Roberval, whom he nicknamed " the petty king of Vimeux," to continue the discovery ; and on the 17th of October, by another patent, the king, " fully persuaded of the good sense, capacity, loyalty, galantry, courage, great diligence, and good experience," of Jacques Cartier, constituted him Captain-General and Master Pilot of the whole expedition.

Meanwhile five vessels were slowly fitted out. But Spain was now alarmed. When Verrazzano ran along the northern coast of the continent bearing the banner of France, she at once sent Estevan Gomez to the same territory, and that navigator in 1525, visited the shore from St. Mary's Bay on the Chesapeake to Narraganasett. Now that France was renewing her attempts to occupy some portion of the New World, Spain prepared to prevent her. Spies were despatched to France to learn all the particulars of the expedition, and the Council estimated at 150,000 ducats the cost of a fleet to " resist and offend that of France." This was more than could be easily given then, and they consoled themselves with the reflection that the French fleet was too small to attack any of the Spanish colonies, and " as for settling on the north sea, there is nothing where the French can go that is to be coveted or worth anything, and even if they do take it, necessity would make them leave it."

The spy who went to St. Malo reported that thirteen ships were fitting out under Cartier ; that he spoke to him, and a relative of his apparently Macé Jalobert, and found that they were going to Canada to settle there and build a fort, carrying mechanics and iron works of all kinds, and that they would start about the middle of April, 1541, with 2,500 men.

This was rather alarming, the more especially as the letter of the ambassador in France, who seems to have demanded explanations of the court, at which he resided, said that they were going 700 leagues from St. Malo. This, on their maps, would bring Cartier to Florida in the discoveries of Ayllon and Gomez, and where De Soto actually was, and enable the French, in case of war, to waylay the treasure-ships of Spain. Hence it was resolved not to let them settle there or elsewhere, but to dislodge them at once, not openly, but by sending some adventurer with an expedition really fitted out by the king, but

nominally a private one, the acts of which might be disavowed when they had irreparably destroyed the French settlement.

Unconscious of the threatening cloud, Cartier with his fleet of five vessels sailed May 23, 1541. The voyage was long and stormy, and he did not anchor before Stadaconé till August 23rd. He planted his new settlement, Charlesburg Royal, at Cape Rouge river, and sent back two of his vessels under the command of Jallobert and his nephew Stephen Noel. On the 7th of September, leaving the fort in charge of the Viscount de Beaupré, he proceeded to Hochelaga. On his return to the fort, he found that troubles had already begun between the French and the natives, and that two of his party had been killed. Mistrust on both sides followed. The winter wore uneasily away. In the Spring the French fairly mutinied; and as Roberval did not appear, compelled Cartier to set sail. In the harbor of St. John, Newfoundland, in June, 1542, he found Roberval, who in vain endeavored to persuade him to return. In October, Cartier, as appears by official acts, was in St. Malo.

It is believed that he subsequently sailed in search of Roberval, but we have no account of his voyage.

His subsequent years were spent in St. Malo, or in the village of Limoilou, where he built a dwelling still known, though in ruin, as Portes Cartier. He was ennobled by Francis I, about 1549, and is styled in his later years, "noble homme Jacques Cartier, Sieur de Limoilou."

The period of his death is not ascertained. He died apparently not in St Malo, but at Limoilou, about the year 1555.

Cartier left no children. His nephew Jacques Nouel, "ship captain and Master Pilot," and Olivier Chatton, husband of a daughter of his sister Bertheline, succeeded him as navigators at St. Malo, and as such enjoyed the royal favor. Their descendants still exist at St. Malo, as do also descendants of his uncles on the father's side, who perpetuate the honored name of Cartier.

A portrait of Cartier deemed authentic, has long been preserved at St. Malo, and has in our day been copied extensively in France and Canada.—*New York Historical Magazine.*

SCIENCE.

Leaves from Gosse's Romance of Natural History.

(*Continued.*)

MULTUM E. PARVO.

Natural history affords not a few instructive examples of

"What great effects from little causes flow;"

and these are well worthy of our study, as presenting to us one peculiar aspect of the wisdom of God, with whom nothing is great, nothing small. Some of the mightiest operations in nature are the results of processes, and the works of agents, apparently feeble and wholly inadequate to produce them; and our wonder is excited when we are able intelligently to trace them to their causes. I propose, therefore, to devote this chapter to the consideration of a few of these, which come more immediately within the province of the naturalist. They may be classed, according to the nature of their operations, as either constructive or destructive.

How many a poetic dream is associated with the sunny isles of the Pacific! What a halo of romance encircles all our ideas of those mirror-like lagoons in the midst of the great ocean-waves, those long, low reefs just emerging from the sea, on which the cocoa-nut palm is springing from the very water's edge! Beautiful they are in our imagination, as we have realised the pictures drawn by Cook, and Kotzebue, and Beechey, by Stewart and Ellis, Darwin and Cheever. But, when we know that these thousand isles, these endless reefs, these huge barriers that curb the furious ocean, are produced by tiny, soft-bodied sea-anemones, by atoms of pulp, sluggish and seemingly helpless morsels of animated jelly, individually no bigger than the smallest flower that nestles in the hedge-bank—our wonder, instead of being dispersed by our philosophy, is deepened and incomparably augmented by it. "We feel surprise when travellers tell us of the vast dimensions of the Pyramids, but how utterly insignificant are the greatest of these when compared to these mountains of stone accumulated by the agency of various minute and tender animals! This is a wonder which does not at first strike the eye of the body, but, after reflection, the eye of reason."

The researches of the eminent naturalist whose words I have just quoted, have shewn us that the coral polype does not build from the fathomless depths of sea which immediately surround these reefs and islands. He seems to imply, indeed, that the coral animals cannot exist at a greater depth that thirty fathoms; but, whatever may be the case in tropical seas, we have already seen that living corals exist and build compound polypidoms at far greater depths in our northern latitudes. Assuming, however, that no reef is commenced deeper than thirty fathoms, and that below that depth the building instinct is not carried on, the only hypothesis which meets all the exigencies presented by the actual phenomena of fringing reefs, encircling or barrier reefs, and atolls or ring reefs, is that propounded and ably maintained by Darwin, that the whole area of the Pacific is slowly sinking; that all the reefs and islands are the summits of former mountains; that all the coral structures were originally attached to the land at a shallow depth, and that, to whatever depth below they now extend, it is only in a dead condition, and has been effected by the subsidence of the supporting land carrying the coral with it; while the successive generations of the living polypes, ever working upwards on the old dead foundation, have maintained a living coral structure near the surface, and that nearly in the same outline and form as the original foundation.

It does not accord with my purpose to enter into the details of this beautiful theory, but rather to present my readers with some vivid pictures of the wonderful structures themselves, as sketched by those who have seen them. In coasting along a tropical reef, the extreme clearness of the water permits the corals shrubs and groves to be distinctly seen, which rise from the blue transparent depths. They take various forms—some massive, with meandering channels over the rounded surface; some forming honey-combed blocks formed by the union of thin plates at various angles; many growing like trees or shrubs with leafless branches, more or less ramified, and with the twigs more or less slender and pointed, or thick and rounded. Under water, the whole surface is covered with a layer of jelly-like flesh, of many brilliant colours, formed by the crowding together of the myriad tiny polypes, which protrude their slender tentacles and expanding disks from the individual cells. Even when severed, the branches are exquisitely beautiful so long as they retain the faint purple halo that plays around their ivory tips, but which soon vanishes. A rude touch beneath the water will cause the lovely tints—brilliant crimson, orage, and emerald green—to disappear, by the withdrawal of the alarmed polypes; but they soon protrude again, and expand in their original loveliness.

The interest with which these gardens are contemplated is enhanced by the multitude of strange creatures which crawl over and through the shrubs. Fishes of the most gorgeous hues, elegant shells, with clouded and spotted animals carrying them, nimble prawns of crimson and yellow, long gliding green worms, and purple sea-urchins, with enormous spines, here find their home and live at ease beneath the unclouded sun.

The dimensions attained by the labours of the minute workmen are the most astonishing part of the spectacle. "Some individual specimens of *Porites*, in the rock of the inner reef of Tongatabu, are twenty-five feet in diameter; and *Astreas* and *Meandrinas*, both there and in the Fejees, measure twelve to fifteen feet. The platform resembles a Cyclopean pavement, except that the cementing material between the huge masses is more solid than any work of art could be.

"Sometimes the barrier reef recedes from the shore, and forms wide channels or inland seas, where ships find ample room and depth of water, exposed, however, to the danger of hidden reefs. The reef on the north-east of New Holland and New Caledonia extends four hundred miles, at a distance varying from thirty to sixty miles from shore, and having as many fathoms of depth in the channel. West of the large Fejee Islands the channel is in some parts twenty-five miles wide, and twelve to forty fathoms in depth. The sloop-of-war *Peacock* sailed along the west coast of both Viti Lebu and Vanua Lebu, within the inner reefs, a distance exceeding two hundred miles.

"A barrier reef, inclosing a lagoon, is the general formation of the coral islands, though there are some of small size in which the lagoon is wanting. These are found in all stages of development: in some the reef is narrow and broken, forming a succession of narrow islets with openings into the lagoon; in others there only remains a depression of surface in the centre to indicate where the lagoon originally was. (1) The most beautiful are those where the lagoon is completely inclosed, and rests within, a quiet lake. Maraki, one of the Kingsmill group, is is one of the prettiest coral islands of the Pacific. The line of vegetation is unbroken, and, seen from the mast-head, it lies like a garland thrown upon the waters.

"When first seen from the deck of a vessel, only a series of dark points is descried, just above the horizon. Shortly after, the points

(1) This does not agree with Darwin's theory of subsidence.

enlarge into the plumed tops of cocoa-nut trees, and a line of green, interruped at intervals, is traced along the water's surface. Approaching still nearer, the lake and its belt of verdure are spread out before the eye, and a scene of more interest can scarcely be imagined. The surf, beating loud and heavy along the margin of the reef, presents a strange contrast to the prospect beyond—the white coral beach, the massy foliage of the grove, and the embosomed lake, with its tiny islets. The colour of the lagoon water is often as blue as the ocean, although but fifteen or twenty fathoms deep; yet shades of green and yellow are intermingled, where patches of sand or coral knolls are near the surface, the green is a delicate apple shade, quite unlike the usual muddy tint of shallow waters.

"These garlands of verdure seem to stand on the brims of cups, whose bases root in unfathomable depth. Seven miles east of Clermont Tonnere, the lead ran out to eleven hundred and forty-five fathoms (six thousand eight hundred and seventy feet) without reaching bottom. Within three-quarters of a mile of the southern point of this island, the lead had another throw, and after running out for a while, brought up for an instant at three hundred and fifty fathoms, and then dropped off again and descended to six hundred fathoms, without reaching bottom. The lagoons are generally shallow, though in the larger islands soundings gave twenty to thirty-five, and even fifty and sixty fathoms."

The rate at which coral structures are formed is an interesting subject of enquiry, and various opinions have been formed on the point, some affirming that no perceptible increase takes place in several years, others that the process is so rapid, that the Pacific is fast filling up. Darwin's theory of subsidence netgatives this conclusion, independently of the ratio of growth. There are facts on record, however, which imply that, in certain circumstances, the process is rapid. A channel that had been dug through the reef of Keeling Atoll for the passage of a schooner, that had been built on the island, from the lagoon into the sea, was found ten years afterwards to be almost choked up with living coral. An interesting experiment was tried at Madagascar, by securing several masses of living coral by stakes three feet below the surface. Seven months afterwards they were found nearly reaching to the surface, firmly cemented to the rock, and extended laterally several feet; a remarkably rapid growth!

An ingenious inquiry has been started, whether the coral polypes may not yet be emloyed by man for the construction of sea-walls and reefs, in places within or near the tropics, where they are needed. Professor Agassiz has shewn that it is not difficult to obtain living specimens of the zoophyte, and to preserve them, so as to study at leisure their habits and motions. Why, then, it as been asked, as we employ the silk-worm, and furnish it with food and material to spin for us our silks, and as we plant and form beds of oysters in favourable locations, where we please, may we not also employ the agency of the coral lithophyte, to lay the foundations, for instance, of a lighthouse, or to form a breakwater where one is needed? Such a practical result is by no means improbable, from the minute and scientific observations now making upon these busy little builders of the deep.

Let us look now at another class of labourers by whom mighty deeds are performed, though the performers themselves are so inconceivably minute, that to say they bear the same relation to the coral polype that a mouse does to an elephant, would be greatly to overrate their dimensions. They are, in fact,, invisible to the sharpest sight, except when aggregated together. I refer to the *Diatomaceæ*.

Of late years the attention of microscopic observers has been largely and increasingly occupied by a tribe of organic beings which are found to exist in all part of the world, fresh and salt waters chiefly, and present a great variety of species as well as of form and markings. They consist of a glassy shell, formed of flint, inclosing a soft coloured substance, generally of a golden yellow or brown hue. This is called the *endochrome*, and the shell is called the *frustule*. The latter has a determinate form, which often assumes extraordinary elegance, and is usually marked with series of specks, which are either knobs or pits, arranged in the most varied and exquisite patterns. They may exist either as isolated forms, or, more commonly, as united into long chains, or other connected figures. These are called Diatoms. They have spontaneous movements, and hence they were considered, when first discovered, to be animals; but the opinion now generally prevails, that they are plants of a very low grade.

The influence of these tiny atoms upon this world in which we live is almost beyond belief. "The whole bottom of the ocean," observes Dr Barclay Montgomery, "seems to be in a great measure made up of these bodies, Sir John Ross and other Arctic explorers speak of a large bank called the Victoria Barrier, 400 miles long and 120 miles wide, composed almost entirely of *infusoria*. During the last week I was engaged in examining a sounding from the bottom of the ocean at the depth of 2000 fathoms, on the exact spot where the Atlantic telegraph unfortunately gave way; although the quantity was minute, still I discovered a great number of interesting forms. What is known as Tripoli powder in the arts consists almost intirely of fossil deposits of the silicious coats of *diatoms*, which from their hardness form an excellent means of polishing metals; these fossil deposits are very numerous and in great quantity in different parts of the world. The town of Richmond, in the United States, is built upon a stratum of these bodies twenty feet in tickness; in California and America generally, in Bohemia, throughout Europe and Africa, and even in our own country, we find similar deposits, varying of course in the different species present..... I have been enabled to examine some of the curious raised fossil beach near Copiapo in Chili, which is gradually forming into stone. Though this beach is one mile from the present shore, and 180 feet above the level of the sea, yet I have found in it *diatoms* of the same species as those that occur on the shore at the present day; the *diatoms* are also found in a fossil state in peat, coal, bog iron-ore, flint, and the chalk formation. Thus, in a geological view, though individually invisible, yet numerically they perform a most important part in the crust of the earth—a part more important than all the mighty monsters that lived in ages past..... What purpose do these bodies serve? It is highly possible that they form, in a great meaure, the food of all the minor aquatic animals more highly organised than themselves; I have often found, on examining shrimps, that their stomachs, which are situated behind the eyes, are entirely filled with *diatoms*. That the siliceous shell passes through nearly intact, there can be no doubt, but it is certain that the internal structure, the endochrome, may be digested and form the nutritive portion; in this view I am borne out by referring to guano—a most prolific source of fossil *diatoms*. Here we find abundance of siliceous shells, in fact their presence or absence is now the test of the genuineness of the article;—these, in past ages, must have been consumed by small marine animals, these again consumed by fish, and these in their turn by birds: in guano I have noticed the proportion of *diatoms* to be in some specimens nearly 1 in 500 parts. A correspondent from Callao, writing to the *Illustrated London News*, on the Cincha guano islands, says the export guano from the islands has increased considerably during the last ten years; between 300,000 tons and 400,000 tons are the annual amount at present: here, in a very moderate calculation, from one spot alone, we have the annual of 500 tons of *diatoms*."

The agency of these mighty but minute forms has been still further developed in some researches of great interest which have been very recently published by Dr Wallich. He has ascertained that they exist in a free, swimming condition, in various regions of the ocean, and at various depths from the surface downward; that their multitude is incalculable; and that they afford sustenance to immense numbers of molluscous and crustaceous animals, which in their turn constitute the food of the most gigantic creatures of the deep. Dr Joseph D. Hooker had noticed the vast profusion of *Diatomaceæ* in the Antarctic Sea; and he was struck by the conspicuous appearance presented by their masses imbedded in the substance of the ice, or washed up on its surface by the action of the billows.

Dr. Wallich found the surface of the Bay of Bengal and the Indian Ocean to be crowded with masses of minute life, forming yellow streaks, flakes, and tufts, intermixed with glistening points, which, when examined, proved to be recognisable forms of the organisms in question. The mighty scale on which the *Diatomaceæ* really exist, did not become manifest, however, until he reached the Atlantic, between the Cape and St. Helena.

"It was here that, for many degress, and in bright, breezy weather, the ship passed through vast layers of sea-water so thronged with the bodies of a species of *Salpa* (*S. mucronata*) as to present the consistence of a jelly. What their vertical limits were, it was impossible to discover, owing to the speed at which the ship was moving. They appeared to extend deep, however, and in all probability, were of a similar character to the aggregations of what is called whale-food in the higher latitudes. Each of these *Salpæ* measured about half an inch in length; but so close was their aggregation, that, by a sudden plunge of an iron-rimmed towing-net half the cubic contents, from which all water had percolated, generally consisted of nothing but one thick gelatinous pulp. Each individual presented a minute yellow digestive cavity, the size of a millet-seed, which contained Diatomaceæ. Foraminifera, and other organic particles.

"If we take into account the numbers of Diatomaceæ and Foraminifera that must exist in order to afford even a small integral proportion of the diet of these creatures, the vast renewal of supply that must be perpetually going on, and the equally vast multitude of these Diatom-consumers that yield, in their turn, a source of food to the gigantic Cateceans and other large creatures of the sea,—it becomes possible, in some measure, at least, to form an estimate of the manner in which the deep-sea deposits become accumulated."

The same observer has, with great ingenuity, applied these facts to the solution of that much-vexed question, the origin of the masses of flint that are found in the chalk. Diatoms are found in great numbers

in these nodules, but the difficulty was, how to account for their aggregation in these irregular masses. This is solved by the hypothesis that they are the excrement of whales,—the insoluble remains of the Diatoms, orginally devoured by the Molluscs, which in their turn found a grave in the stomach of the Cetacean. "We find that the siliceous particles of the *Diatomaceæ*, *Polycistina*, *Acanthometræ*, and *Sponges*, exist not only in a state of the utmost purity, but that they occur precisely in that state of minute subdivision which favours the solvent or aggregative process in an eniment degree. We see that they are gathered together by the Salpæ, in the first instance, from the element in which they live, and that they are freed of all, or nearly all, their soft portions, by the action of the digestive cavities of these creatures. We find that the Salpæ again, in inconceivably vast numbers, afford almost the entire food of the largest orders of Cetaceans; and I therefore think we are able to infer, with certainty, that, in the complex stomachs and intestines of the latter, the further process of aggregation of siliceous particles goes on upon a gigantic scale, aided by the presence of the alkalies, and that the aggregated masses being voided at intervals, slowly subside, without interruption, to the bed of the ocean."

Darwin records having seen clustered objects in the sea near Keeling Atoll, which he does not name, but which from the figures he has given must have been Diatoms. But all the streaks and bands of colour seen on the ocean are not attributable to plants: some of them are certainly of an animal nature. The following phenomenon was noticed by the observer last named on the coast of Chili. The vessel passed through broad bands of reddish water, which when examined microscopically swarmed with minute active animalcules, darting about, and often exploding. They swam by the aid of a ring of vibratory cilia, which suggests the thought of the larvæ of some Annelid. They were exceedingly minute, so as to be quite invisible to the naked eye, being not more than one thousandth of an inch in length. Their numbers were infinite, for the smallest drop of water which could be removed contained very many. Yet in one day, they passed through two spaces of water thus stained, one of which alone must have extended over several square miles. How utterly inconceivable, then, must have been the multitude of these minute creatures!

(*To be continued.*)

EDUCATION.

Scotch Scholastics.

[A Paper read before the McGill Normal School Teachers' Association, by T. A. Gibson, Esq., M. A.]

At the last monthly meeting of our Association, my colleague in the High School, Mr. Murray, read a very instructive and interesting paper on *English Etymologies*. It was also very comprehensive, a *multum in parvo* gratifying and refreshing the memories of some by the recognition of old familiars, and introducing new acquaintances to others. Mr. Murray seems to have traversed this field *con amore*. Having myself traversed the same field with a somewhat congenial spirit, when I was called upon to make up my mind to select a subject for this evening's paper, I felt at first inclined to follow up Mr. Murray's lead by devoting my remarks to a department of *Etymology* which, upwards of a quarter of a century ago, engaged my enthusiastic research, I mean, the *etymologies* of *Names of Places*. Indeed, without incurring the charge of egotism, I believe that I am correct in stating that, since the publication of my small work, entitled "Etymological Geography," drew the attention of compilers of Geographical text-books to this useful and interesting branch of geographical knowledge, it has received the systematic prominence to which it is entitled. An examination of the best handbooks then and now in use serves to establish this fact. As however variety in the subjects for *discussion here* and *reflection hereafter* seems desirable, I have dissuaded myself from the compilation of a paper on a subject similar to our last and have undertaken that of one which has required at my hands more research than I at first anticipated. Even a cursory glance at the prominent scholastic literature and men of Scotland may prove neither uninteresting nor unprofitable to a Teachers' Association. As I propose to allude briefly to the different sorts of schools in Scotland attended by the youth of both sexes, I may appropriately designate my paper by the title of

SCOTCH SCHOLASTICS.

In the outset I may remark that Scotland contains 33 counties, subdivided into upwards of 1000 parishes. To each parish at the Reformation were assigned a clergyman and school-teacher. Since then several parishes *quoad sacra* have arisen within the civil parishes, in which the population has in the course of generations, through commercial progress and other causes, greatly increased. (Ecclesiastically considered in connection with the Establishment, Scotland is at present controlled by 16 Synods, subdivided into 83 Presbyteries. The most extensive Synod is that of Glasgow and Ayr, comprising 8 Presbyteries and about 150 parishes; whilst the smallest is that of Shetland in the extreme north, comprising only 2 Presbyteries and 12 parishes.) I am led to say a little in regard to Parochial and Burgh schoolmasters in the first place. The appointment of a parish-teacher rests with the heritors or landed proprietors of the parish. These at a legal meeting convened for the election, settle the candidate by a majority of votes. By this appointment he becomes entitled to a proportion of salary from each heritor according to the *cess* (or census) *roll*, but subject to the following condition. Within a given time he must appear at a statutory meeting of the Presbytery of the bounds, and, having presented an extract minute of his appointment, he must undergo examination in the branches requisite for such school. Having procured a satisfactory certificate of his qualifications to instruct in these branches, he becomes fully entitled to all the emoluments of the office *ad vitam aut culpam*. (Having twice undergone this ordeal, not without some trepidation as to the result, I can bear testimony to its generally comprehensive and searching character.) The teacher, according to the terms of his appointment just referred to, cannot be removed from his office and its emoluments as long as he maintains respectability of character and discharges efficiently his duty. Under circumstances of inability through ill health or advancing years he is allowed to employ a substitute with the consent of the heritors and the certificate of the presbytery. Sometimes the superannuated incumbent compromises with the electors, that a permanent successor may be appointed. In cases of notorious immorality or neglect of duty the incumbent is liable to be summoned before the presbytery, i. e. *libelled*; and, if the charges against him should be proven, the sentence of deposition by the presbytery is considered as final and without the power of appeal to a civil court. At any rate the law formerly enacted so, and the clause in the act was regarded by many teachers as a sore grievance. I rather think that the objectionable clause has been since amended. Besides the salary and fees each teacher has, *by statute*, a dwelling-house and garden. These, of course, vary much according to the liberality or niggardliness of heritors. In the case of extensive parishes the heritors sometimes erect one or more schools in such localities as may suit the population. These are called *side* schools, and are similar but inferior to the parish schools, being partially endowed like them. The parish schools used to be annually examined and reported upon by the members of presbytery or committees thereof. In this respect there has been a great change within the last quarter of a century, relieving the presbyteries in a great degree from this periodical burden; inasmuch as, by the appointment of school inspectors by the government, these now inspect and report, not only upon the schools of the Establishment but upon those of the Free Church and of all receiving aid from government.

(I must here apologize for bringing a few particulars under your notice in a very disconnected manner as I have taken them up in the order in which they started to my memory.) It may be interesting to mention a few items in regard to the Fund for the Relief of the widows and children of Burgh and Parochial schoolmasters. This numerous body, impressed with a sense of their obligations to provide somewhat towards the relief of their widows and families, applied for and procured an Act of Parliament in 1806. By this Act it was provided that every incumbent in a Burgh and Parochial school at the time of its passage had the option of becoming a contributor or *non*-contributor to the Fund; but that every teacher appointed to a school thereafter should intimate, within the statutory period after the date of his election, to the collector chosen by each presbytery, his choice of one of the 5 annual rates of payment. These rates were 1, 2, 3, 4 or 5 guineas according to the 1st, 2nd, 3rd, 4th or 5th classes. According to the 5 rates the widows are entitled to an annuity of £6, £12, £18, £24 or £30 sterling. Any teacher failing to signify his choice of a rate within the prescribed date subjected himself to be attached to the 3rd or middle rate of guineas. Such contributor is liable to pay double in the years of election to office and marriage. On resignation he is at liberty to discontinue, of course forfeiting all the previous payments. (I have myself experienced the forfeiture to some extent.) It is gratifying to find from the Annual Report for 1858, the last which I have in my hands, that many, who had held office for a few years but have since been ministers or professors for many years, have continued their yearly contributions. Of such I notice some in the British Colonies; as, Revd. Dr. Donald, St. Johns, N. B., whose date of entry is 1838, Revd. D. Maclead, Cape Breton, whose entry dates as far back as 1827, each ranking under the 4th class, or the rate of 2 guineas. On remarrying, a widow forfeits her annuity. In 1858 the capital invested in heritable security was £77,600, cash in the Royal Bank £5,500.

In 1858 there was an increase over 1857 of £2,565 3 2. In the

same year the annuitant widows amounted to 206 and children to 17,223; amongst whom was distributed the sum of £3,043. The total contributors amounted to 1,265. There were 59 vacancies and 15 non-contributors surviving since the passage of the Act in 1806; so that, when these vacancies shall have been filled up and the survivors shall have died, there will be a gross total of 1,339, to which are liable to be added the masters of any newly erected schools coming within the scope of the Act. The annual contributions in 1858 were £2,731 1. When I was in Scotland in 1859, I understood that it was the general impression that the Fund was so prospering that it was likely that the annuities might be doubled, thus making the highest £60.

To several parishes have been mortified or given in mortmain by parties dying at home or abroad considerable sums of money, hence called *mortifications* according to a Scotch acceptation of the term, the interest of which goes towards the education of a certain number of paupers, sometimes limited to those bearing the names of the *mortifiers*. Children of paupers are now generally kept at school at the expense of the parish; or teachers are bound to receive a certain numbers at a reduced fee.

In connection with this it may be noticed that there exist in the capital of Scotland and in Glasgow, the commercial capital, county-associations or clubs, composed of natives of various counties, who, by having attained after a long residence to positions of trust and usefulness, have become identified in large numbers with these capitals in various walks of life. These clubs, whilst cherishing friendly intercourse amongst the members, have in view the promotion of the welfare of young countrymen recently resident among them, and the advancement of education in their respective counties by the distribution of prizes, the institution of bursaries and otherwise. The rules provide for the carrying out of these last objects by means of resident standing committees, and, in order to interest the counties, local committees are appointed, that correspond with the head committees. Such clubs are sometimes confined to a single county, when large, but frequently embrace a few adjoining counties. In some cases prizes for excellence in a great variety of branches are awarded to competing pupils who have assembled from the schools of an entire county and have been subjected for several hours to a searching examination by competent examiners selected by the office bearers. In this way the relative merits and demerits of teachers as well as of pupils are drawn forth. On such occasions the schools usually receive 2 or 3 holidays. There are few counties now that are not reaping benefit from the formation of such clubs.

Teachers who are co-presbyters frequently form themselves into associations for the purpose of consulting together on subjects affecting their individual interests or those of the body generally. Periodical meetings, monthly or quarterly, are held and essays read, &c. The members usually dine or sup together, thus cherishing friendly intercourse and a proper *esprit de corps*. Intimacies, lasting through life, are thereby frequently formed.

In 1818, 45 years ago, certain Burgh and Parochial schoolmasters, taking into consideration the serious obstacles presented to teachers and scholars not only by the inferior and unsuitable character of many schoolbooks, but by their almost endless variety, formed themselves into a society for the purpose of remedying in some degree the evils connected therewith. It is called the "Scottish School-Book Association." It has for its object the preparation and improvement from time to time of a complete system of school-books for the use of the schools of the members, and also of schools in general. Membership depends upon the regular use of a certain number of the association's publications. A general meeting is held annually in Edinburgh for the transaction of business and the election of office-bearers.

From the 40th Annual Report for 1858, I gather the following items. The members amounted to 352.

From the profits arising from the sale of the books it was agreed to award annually 6 Bursaries towards assisting deserving young men in the prosecution of their studies at college. The Bursars must be the sons of members of 5 years' standing or of deceased or retired members for the same period. When there are more candidates than bursaries, the decision is by comparative trial; when there are not, by relative trial. The trial may be either oral or by means of examination papers. £100 were allowed for 1858–9, the highest being £20. The bursaries are available at any of the 4 Scottish Universities. The treasurer pays the whole sum on the 1st of December on the production of the Matriculation ticket. Some idea of the nature and extent of the trial may be gathered from the following extracts.

"Candidates must, along with their names, lodge a statement of what they *profess*; and the following is the lowest *profession* that will entitle a first year's Student to be taken on trial, viz.—Association's Latin Delectus; Cæsar's Gallic War, Books II. and III.; Virgil's Æneid, Book I.; Greek Grammar; Greek New Testament, First Six Chapters of St. John's Gospel; Homer's Iliad, First 50 lines of Book I.; a translation of a few sentences into Latin and Greek; Outlines of Ancient Geography, *Italy*; Roman Antiquities, *Religion*; Euclid, Book I.

"The following is the lowest *profession* that will entitle a second year's Student to be taken on trial,—Livy, Books I. and II.; Horace, Odes, Books II. and II.; Mair's Introduction; Xenophon's Anabasis, Book III.; Homer's Iliad, Book II.; a translation of a few sentences into Latin and Greek; Outlines of Ancient Geography, *Italy*; Roman Antiquities, *Religion*.

"The Bursaries to be available at any of the four Scottish Universities."

The publications in English, Arithmetic, Geography, History, Mathematics and Physical Science amount to 20. A few of the Latin series has been issued. 13 school-room Maps and skeleton maps of Europe, Scotland and England, of a superior kind, have also been issued.

The publications have been compiled in whole or in part from manuscripts sent in by parties induced to compete in consequence of advertisements in the newspapers offering premiums for those adjudged as best by reliable judges, selected by the Association, whose names are published. The notes, accompanying the successful MSS, bearing a motto, being opened, the authors are ascertained and made known to the public. (I am fain to mention that, being a competitor on one of the early occasions, I had the gratification of finding my M S selected as second-best, entitling me to £15 stg.)

Besides the Parochial schools there are *Burgh* or *Grammar* schools chiefly under the control of the Councillors or Magistrates of the Royal Burghs. (There are 63 royal burghs and 13 towns ranking with them.) Little of the early history of Grammar schools is known. Like the other educational institutions of Scotland, they at first existed chiefly for ecclesiastical purposes. As the Universities were founded in connection with bishoprics, so Grammar schools were at first attached to cathedrals or convents. The bishop of the diocese was chancellor of the University by right of office (*ex officio*), and the abbot of the monastery was superior and patron of the Grammar school. Thus the Grammar school of Edinburgh owes its existence to the monks of the Holy Rood, and that of Glasgow sprang from the cathedral. These are now respectively designated as the high schools of Edinburgh and Glasgow. The monks devoted much time to the instruction of ecclesiastics or young men destined for the priestly office, whilst the sons of the nobility, as a privileged class, were permitted to share in the advantages of their instructions. Thus young ecclesiastics and nobles alone enjoyed the benefits of a classical education. By and by provision was made for the instruction of those of inferior rank, excluded from the advantages of the monastery, as the friars, not constantly required there, were permitted to devote their spare time to their education. In this way the monks or friars were the first public teachers.

As both the Parochial Burgh schools have in many instances been found inadequate to the advancing requirements of society, there have arisen within the present century many educational institutions of a higher character, occupying a middle rank between the Universities and the Burgh or parochial schools. These *Academies*, as they are called, have through the fostering care of generous patrons exercised a most beneficial effect on all ranks. They owe their foundation to the contributions of individuals resident in the district or who may have left in early life and acquired competency or wealth abroad. The direction is chiefly in the hands of resident subscribers. In the case of an election of masters, subsribers to a certain amount are entitled to vote, whilst those at a distance can do so by proxy. The directory is usually incorporated by royal charter. Besides pupils from the town and the surrounding parishes and counties, not a few are the children of men engaged in commercial and military pursuits in foreign parts. In several cases Burgh or Parochial schools have been merged into these Academies. There is usually a staff of 3 or more masters. One of these is sometimes regarded as specially the Burgh or Parochial teacher, possessing exclusively the privileges of Burgh and Parochial teachers. Sometimes the entire staff rank as such. Among the Academies may be mentioned those of Edinburgh, Cupar (Fife), Elgin, Banff, Perth, Inverness, Tain, Dumfries, Ayr, &c., &c.

Within the present century several customs in connection with these Burgh or Parochial Schools have become obsolete. I may allude to two, viz., *Cock fighting* and *Candlemas Day*. The former was a sport, handed down from ruder days, and generally was kept up once a year. Of course the day was a holiday the desks and forms were arranged around the walls so that a clear arena was reserved for the fierce combatants, in whose defeat or victory the youthful spectators took a lively interest, as the boy was hailed "King," whose cock held the pit as defiant victor, while the owners of cocks that shirked or hung fight when set on the arena (commonly called *fugés*) were in great disgrace, their birds being forfeited to the teacher or a

fine paid instead. In the evening there frequently ensued a ball, in which of course the favorite reels and *contres-danses* (country dances) were kept up till a late hour to the music of fiddles and perchance the bag-pipes, the *King and Queen* being distinguished by leading off dances.

On the 2nd of Febuary, Candlemas Day, (which was formerly celebrated by burning many candles) pupils were in the practice of waiting upon their teachers and presenting them with several pounds of candles of the best description ; so that they usually received a supply of that article, so necessary for domestic use before the discovery of gas and coal-oil, sufficient for a year's consumption. I myself have a distinct remembrance of a chest of drawers being well filled on such occasions in my father's house in Forfar. Since the discontinuance of the candle gift its equivalent in money is kept up in some schools, the parents in this way showing their good wishes for the welfare for the teacher and his family. The day is observed as a holiday.

In the high School of Edinburgh and Glasgow and in some of the upper Academies and Burgh Schools the *vacation* continues through the months of September and November. In the lesser towns it seldom extends beyond a month. In the landward parishes its length and time are chiefly regulated by the operations of the harvest, in which the scholars afford material assistance.

From the Census of Scotland for 1861, issued by the Register General and his Assistant, I may read from the following headings viz ;

TEACHERS AND SCHOLARS.

It will be observed that teachers are more equally distributed over the country than any other class or profession ; and, in so far as male teachers are concerned, in a ratio tolerably correspondent to that of the population.

It is a natural step from the teachers to the scholars. These comparative tables show that 467,056 persons were tabulated as "Scholars," of whom 241,803 were males, and 225,253 were females. These numbers indicate that 15.2 per cent, of the population, or one in every 6.5 persons, were receiving education at the date of the census, and were returned as scholars.

COMPARISON OF ENGLAND WITH SCOTLAND AS TO SCHOLARS, &c.

It may be noticed, as a singular fact, that although England, by her Occupation Tables, shows that a slightly larger proportion of her population is in the receipt of instruction as scholars—viz., 15.7 per cent. of her population, the number of adults able to sign their names in the marriage registers is very much below that of Scotland. Thus, in 1859, the latest year for which detailed returns have been published for Scotland, 89.1 per cent. of the men, and 77.8 per cent. of the women who married in Scotland were able to sign their names in the marriage register. In England, during the same year, only 73.3 per cent. of the men, and 62.4 per cent. of the women who married were able to sign their names. The cause of this anomaly is worthy of inquiry, inasmuch as it would almost lead to the conclusion that the elementary education in England is of an inferior quality, and consequently sooner lost by a considerable proportion of the population.

Time would entirely fail me to enter at present into details regarding the truly munificent *Dick Bequest*, which applies to upwards of 150 parishes in the countries of Aberdeen, Banff and Moray, if my memory serves me correctly. In reference thereto it may be remarked that the operations of its managers have tended to raise the teachers in these counties very much in professional standing. The *Normal Schools* in Edinburgh and Glasgow, in connection with the Established and Free Churches. The *Charitable or Educational Institutions*, Scotice *Hospitals*, endowed by gentlemen who had amassed wealth by industry and success in business, desirous either of perpetuating their names in connection with these endowments, or of benefiting the generations of the young in their native towns or countries, belonging to particular classes or trades, a preference being sometimes given to certain names ; viz, in Edinburgh, Heriot's, Donaldson's, George Watson's, John Watson's, Cannin's, Fetter's, Merchant Maiden, Orphan &c. &c. In Glasgow, Hutchinson's &c. &c. In Aberdeen, Gordon's &c.— The Teachers in these Institutions have frequently become ornaments in the Churches and Univerties.— *Ragged Schools*, in connection with which the name of Guthrie is honorably identified, *Private Academies* (male and female). In the former is imparted by a select staff of teachers, instruction qualifying for the Universities, Army or Navy, while in the latter the Educational wants of the fair sex are fully supplied.

We propose to devote a short space to notices of the four gentlemen who, within the last century, have occupied the Rectorial Chair in the High School of Edinburgh. In 1764, after filling for 3 years the office of Head-Master in George Watson's Hospital, Alex. Adam, was appointed by the City Council the *Joint-Rector* with Alex. Matheson during a period of bad health. After an interval of 4 years he became *Sole-Rector*. He filled the office for 41 years. Amongst his pupils will be found the names of most distinguished statesmen, lawyers and men of letters. He had a share in moulding the youthful minds of such men as Henry (Lord) Brougham, Sir Walter Scott, Francis Jeffrey, &c. "It was from this respectable man," says Sir Walter, "that I first learned the value of the knowledge I had hitherto considered only as a burdensome task."

Mr. Adam was the youngest son of an industrious farmer in the parish of Rafford, Moraysh ; and received the elements of his education at the parish school. Here he continued till he was considered fit to come forward as a *bursar* at the university at Aberdeen. His failure in the attempt only stimulated him to fresh exertions, and through the representation of a clergyman of Edinburgh, a relative of his mother, he was induced to try his fortune in that metropolis. Here he prosecuted his studies at the University under unexampled hardships, which his biographer details. These far exceeded the average of hardships undergone by the least favoured of Scotia's students. Shortly after entering upon the duties of the Rectorship he began to compose a series of works designed or adapted to facilitate the study of Latin language. He first composed in English and published "Rudiments of the Latin and English Grammar" with the view of combining the grammars of both languages, and superseding the grammar of Ruddiman. He regarded as anomalous and preposterous (and rightly according to our judgment) the hitherto almost universal practice of teaching boys Latin from a text-book written in the language which they were going to learn. This rational innovation was met with the bitterest opposition by the generality of teachers, so firmly had Ruddiman's Rules for Latin Grammar in hexameter verse been fixed in the memories of the scholastic profession. Even in the High School itself not one of his four Classical colleagues (whose pupils were accustomed at the commencement of the 5th year to join the Rector's class with the view of finishing the curriculum under him) was induced to introduce it for several years. It received however the approbation of a discerning few, among whom may be mentioned Lord Kames, Bishop Lowth, and Dr. Vincent, Master of St. Paul's School, London. The merits of the Grammar have been long since approved, and it has come into extensive use both in Great Britain and America. At intervals of a few years he brought before the public in succession his other works, which have proved so serviceable to classical sudents ; viz. Roman Antiquities, Classical Biography, a Latin Dictionary, &c. These works came out in octavo. The "Summary of Antiquities" has gone through several editions, much improved by the editorship of Dr. Boyce, one of the Classical Masters of the School, and illustrated by handsome cuts. It has become the standard text-book on this subject even in the "Eternal City." I have had it from the lips of Dr. Adam's immediate successor that during the compilation of these works he was in the habit, even in the depth of winter, at 4 in the morning, of carrying a load of books for research from his library to the warm kitchen and of continuing his, to many dry, labours till towards day-break when the stir of the family reminded him of the duty of ceasing from them. From his publications chiefly, he is said to have died worth about £20,000. On the 13th December, 1809, whilst engaged in his professional duties, he was seized with apoplectic symptoms. In a few days he fell into a state of torpor which brought on death on the 18th. His last words, remarkably characteristic of the prevailing tenor of his mind, were these ; "It grows dark, boys, you may go."

In 1809, Dr. Adam was succeeded by Mr. James Pillans, a favourite pupil ranking next to Francis Horner when Dux of the school in 1792. After attending the University he spent several years in England where he became well acquainted with the different systems of education pursued in that country. Accordingly he introduced advantageously severel new features derived from experience of the methods of instruction in the large Classical Schools of Eton, Rugby, &c. The chief of these was the practice of Latin versification. In the 16th century, Scotchmen were great proficients in this art, as is testified by the poetry of Buchanan and others, whilst in more recent times Southern Scholars far excel their Northern neighbours. During his incumbency the pupils under him exceeded in number those of any previous period in the history of the High School. In teaching his large classes, sometimes amounting to 200, he introduced the monitorial systems of Bell and Lancaster. He held the office until 1820, when he was removed to the chair of Latin or Humanity in the University. The honorable distinction of *Literæ Humaniores* has been given to the Latin Classics from their humanizing influence. He continued to discharge the laborious duties of this chair with the highest success and acceptance (although with some falling off in the latter years), till the close of the session in April, 1862, when he resigned after an occupation of the Chair for 42 years. He survived his resignation for nearly a year, having died in March last at the advanced aged of 86.

Besides "First Steps in the Physical and Classical Geology of the Ancient World" and "Elements of Physical and Classical Geology," to which is annexed in an appendix a valuable anthology containing a

selection of passages from the Latin poets, illustrative of ancient localities and peoples, the Professor issued in 1856, a volume in large octavo, entitled "Contributions to the cause of Education," and dedicated, with permission, to Earl Russell, a fellow-collegian in Edinburgh. From a glance at these it may be seen how largely he wrote on this subject. To mention a few — "Principles of Elementary Teaching, chiefly in reference to the Parochial Schools of Scotland, in two Letters to T. F. Kennedy, M.P., "Speech on Irish National Schools, two articles in the Edinburgh Review on National Education in England and France, Minutes of Examination before a large select committee of the House of Commons on the subject of Education, in 1834, three lectures on the Relative Importance of Classical Training in the Education of Youth, Rationale of School Discipline, and a host of other papers.

Mr. Pillans was succeeded in 1820 by Mr. Carson, who had for 15 years discharged the duties of one of the Classical Masterships with acceptance. A native of Dumfriesshire, he received the elements of his education at the far-famed School of Closeburn, which had the reputation of sending forth some of the most distinguished Classical Scholars in Scotland about the close of the last and commencement of the present century. Among these I may mention Drs. Hunter and Gilespie, both professors of Humanity in St. Andrew's University. His editions of most of the Classical Authors in common use in School and College, that issued from the St. Andrew's University printing-press, were unrivalled at the time for their accuracy of punctuation and typography; and Dr. Hunter's Latin prefaces have secured for him a foremost name in proficiency of Latin composition. Mr. Carson, before his connection with the Edinburgh High School, was rector of Dumfries Academy for some years. He occupied the rectorial chair in the metropolis till 1845, when he resigned, having faithfully laboured in the Institution for 40 years. His colleagues, in unamiously passing resolutions expressive of their deep regret at his retirement, conclude thus: "He was popular beyond all others as a master, the last class formed by him having been the largest ever assembled within the walls of the High School. He edited Phædrus and Tacitus, annexing to the former a full vocabulary of all the words, with renderings of the more obscure passages, &c.; while the latter are much appreciated by Classical Scholars for the accuracy of the punctuation and the judicious selection of the various readings. His principal origiual work is, "The Construction of the Relative Qui, Quæ, Quod," a work highly approved of by Dr. Parr, one of the most distinguished Classical linguists of this century.—For upwards of 50 years before Mr. Carson's accession to the rectorship, the New Town had been rapidly extending and attracting to its handsome mansions the more wealthy and aristocratic portion of the inhabitants. Gradually, feelings of dissatisfaction on account of the distance of the High School in the Old Town began to be felt and expressed. These eventuated in the foundation of "the Edinburgh Academy" in 1822, and in its opening in 1824. In cousequence, a generous rivalry between both institutions sprang up, and has since existed, conducing materially to each other's improvement. The desirability and necessity of a larger and more commodious building in a more central quarter of the city began soon to be discussed in the newspapers—which resulted in a determination on the parts of the patrons, the City Council, to build a suitable new edifice. The foundation stone was laid by the late Marquis of Breadalbane in July, 1825, and the opening took place in June, 1829. Both events were signalized by ceremonies and processions unsurpassed in the history of the metropolis. It occupies, it may be said, almost an intermediate locality betwixt the Old and New Towns, and is certainly one of the most elegant edifices in the City. Its whole expense amounted to nearly £35,000. Of this large amount George IV. contributed £500 through Viscount Melville, *alumnus* of the School. On the occasion of Dr. Carson's death in 1850, besides the erection of a handsome cenotaph in the spacious lobby of St Gile's Church, his friends and admirers formed themselves into "the Carson club" and subscribed the sum of £50, the interest of which provides a gold medal, called "the Carson Medal," presented every year to the writer of the best English essay on a prescribed subject connected with Classical antiquity.

Shortly after the resignation of Dr. Carson, Dr. Leonhard Schmitz was elected to the office, which he continues to hold at the present time. He is a Rhenish Prussian, having been born in 1807, at Eupen near Aix-la-Chapelle. In his 12th year he lost his right arm, a very serious accident indeed, but one which ultimately tended to forward his natural inclination to follow a learned profession; for in 1820, he entered the Royal Gymnasium of Aix-la-Chapelle and continued there till he completed its full curriculum of 8 years. On finishing the course of study in Prussian gymnasia the merit of pupils is indicated by certificates, of which there are 4 grades. Mr. Schmitz obtained a certificate of the 1st or highest class, testifying to his "unconditional fitness" for the University. This distinction had not been awarded to any pupil for many years previously. For 4 years he studied history, philology, &c. under the illustrious Niebuhr and others in the University of Bonn. From the first he had selected the instruction of youth as his profession, and, having completed his academical career, he underwent the prescribed examinations and was pronounced competent to conduct any glass of a Gymnasium. Having in 1835, married an English Lady, to whose health the climate of Bonn proved unfavorable he was induced in the following year to accept of a tutorship in an English family in Yorkshire. For upwards of 3 years he here devoted himself to the systematic study of the literature and habits of thought in Great Britain; in so much that he found it more congenial to his own feelings and tastes to remain in England than to return to Germany: and in 1840 settled in London, devoting himself to his favourite subjects of History and Classical Philology. From this time until his appointment to the rectorship in 1845, he pursued his literary labours with an unwearied perseverance, as may he judged from a partial enumeration of his published productions. In 1840, an English translation of Dr. Whigger's *Life of Socrates*, published in London, and German translation of Bishop Thirlwall's *History of Greece*, published in Bonn. In 1842, conjointly with Dr. Wm. Smith, he issued an English translation of Niebuhr's History of Rome in 3 vols. In 1843, he projected the *Classical Museum*, and continned to act as its editor till its completion in 7 vols. in 1850. To this periodical the foremost Scholars of the age, British and Continental, contributed. Whilst a student under Niebuhr, he had taken copious notes of the Professor's *Lectures on Roman History*. These notes, chiefly through the earnest solicitation of Bishop Thirlwall, he carefully revised, and in 1844 gave to the public, in English, 2 vols. of the *Lectures on Roman History*, commencing at the point at which the historian's published works break off. In the same year the King of Prussia, to whom the first edition was dedicated, presented to him through Chevalier Bunsen, the great *Gold Medal for Literature*, "as a mark of his Majesty's sense of the honour thereby conferred upon the memory of Niebuhr, one of the greatest Scholars of Germany." Since his accession to the rectorial chair his literary labours have been not less adundaut, for he has since brought out in regular succession, an English translation of *Zumpt's Latin Grammar*, a *History of Rome* and also *of Greece*, a translation of *Niebuhr's Lectures on Ancient History* in three vols. and on *Ancient Geography and Ethnography* in 2 vols., an *Elementary Greek Grammar*, &c. &c. In addition to the above, the indefatigable doctor has contributed largely to the *Biographical Dictionary* of the Society for the diffusion of useful knowledge, and to the *Penny Cyclopedia*.

From the adove very hurried and imperfect sketch it is apparent that, in addition to the faithful and successful discharge of arduous and responsible professional duties, the *subsecine* (to coin an expressive word of Latin origin) literary labours of these fonr rectors have excercised an important influence in elevating the higher education of Scotchmen in particular.

An Essay on Common School Education.

BY MISS MARGARET ROBERTSON.

"*What ought our Common School System to aim at? and how can the object aimed at be most effectually attained?*"

The design of our Common School System is to provide the means of education for the children of the people. A few may avail themselves of the superior advantages afforded by our Grammar Schools and Academies, but the mass of the people must depend for the early education of their children, upon the Schools for whose establishment the law, in every settled District, makes provision. In them, many of those who are to enter the learned professions, must commence their course of study, while to the great nnmber of those, who, twenty years hence, are to be the farmers, mechanics, and merchants of our country, they must afford the sole means of acquiring the knowledge, absolutely necessary to even a moderate degree of intelligence. The aim of the system, therefore, ought to he, to provide such means of instruction, as shall prepare the one class for benefiting to the utmost, from the opportunities which higher institutions of learning may afford them, and which shall best fit the other class for the intelligent use of the means of improvement which contact with the world may supply.

In the case of either class, the amount of knowledge to be imparted is not the *only* thing, nor, indeed, the *first* thing to be considered. To develop and strengthen the mental powers, to teach a child to observe, to think, to reason, must ever be the first consideration in any system of education, and the studies to be pursued in our Common Schools, as well as the method by which they are to be pursued, must be decided upon with reference to this end.

The amount of knowledge acquired must, even in the most favourable circumstances, be comparatively small, but were the amount great, it would be valuable to the child, less for its own sake, than for the sake of the mental discipline resulting from its acquisition.

The difference between the boy who has enjoyed five years of faithful instruction and discipline in one of our Common Schools, and the boy who has never entered a school of any kind, lies not alone in the knowledge of reading, writing, arithmetic, and geography, that the one possesses over the other. Compared with the thoroughly educated youth, both may be considered ignorant. But in the clearness of mental vision, which rewards the patient search after truth, in the mental strength, which is the result of difficulties fairly met and overcome, one is far in advance of the other. This difference is not always apparent in the boys. The superiority of the one over the other lies less in what he is as a boy, than in what he may become as a man. Through his books, and his skilful use of them, he has got a glimpse of a world of fact and fancy, which the eyes of the other have never been opened to see. With average ability, his course must be onward. He can never settle down into the *mere* artizan, or tiller of the soil, with no thought beyond the daily labor to be performed, the daily pittance to be earned. Whatever occupation he may choose, it will be pursued intelligently. The habits of patient attention, the ability to fix the mind on one subject, till it has been viewed in all its aspects, which must ever be the result of thorough mental training, will avail him in his workshop, or among his fields. He may forget the facts which formed the subject matter of his school lessons, rules may pass from his remembrance, he may lose his skill in solving problems, and in answering difficult questions, but the mental power acquired in dealing with these things in his youth, will not be lost to his manhood. In this mental power, and in its skillful and honorable application in the management of a man's own business, and in the performance of the duties which he owes to the community, lies the difference between the intelligent and useful citizen of a country, and the man whose only claim to citizenship is, that he earns and eats his daily bread within the country's limits.

A matter of greater importance than the imparting of knowledge, or even than the ensuring of thorough mental discipline to the young, is their moral training. Knowledge is power, but knowledge unguided and unrestrained by high moral principle, is a power for evil, and not for good. Among the schoolboys of to-day, are the Judges, Magistrates, Legislators, of the future. If, twenty years hence, the affairs of this rapidity advancing country are to be subject to the guidance of good men and true, it must be through the influence exerted on the youthful portion of the community during the next ten years. In proportion as they are successfully taught, that even with regard to the affairs of this world "goodness is wisdom, and wickedness folly," will they be worthy to take up the trust, which the future holds for them.

Among the various means to which we have a right to look for the attainment of this end, none can be placed as to importance, in advance of our Common School system of education. How can it be made a more efficient instrument to the attainment of this end?

In attempting to answer this question, it can be no part of the Essayist's duty, to point out those respects in which our school system —as a system, may be supposed, by some, to be deficient, or to suggest changes that might with seeming advantage be made in it. Neither could there be any propriety, in regarding the subject from a point of view which shows it as a vexed question among our legislators, and a vexing question in its practical workings, in more than one municipality in the province. I suppose the question to be answered in this.—

How can the Common Schools of our own district be made most effective as a means of mental culture and moral elevation to the children of the people?

A fair and full answer to the question will, I think, go to show, that as all classes of the community are benefited by the successful working of a well arranged system of Common Schools, so all classes are to a certain extent, though in different ways, responsible for this successful working. But it is upon those whose duty it is to decide as to the qualifications necessary for the teachers of these schools, and to pronounce judgment as to individual cases—and upon these teachers themselves—their fitness for the work, and their devotion to it, that the success of our educational system *chiefly* depends.

Much has been said of late, with regard to the propriety of gradually raising the standard of requirements in those proposing to become teachers, and a little has been done in that direction.—But far more requires to be done. It may be true, that there are few Common Schools, in which there are pupils so advanced, as to be beyond the teaching of one, who has passed a fair examination as the standard of requirements now is. It may be true too, that it is neither desirable, nor possible that the children of our Common Schools generally, should be carried beyond the simple rudiments of an English education. But it is also true, that even the rudiments of an art or science cannot be well taught by one who has not gone far beyond these rudiments. Any one may teach a child his letters, or drill him in spelling words of an indefinite number of syllables, but to teach a child to read well, one must be able to do far more than to tell the letters, or put the syllables together. A limited knowledge of Arithmetic may suffice for the teaching of the simple rules, the mere mechanical work of adding or multiplying, but only one who is skilled in the art, who understands the science in its relation to other branches of mathematics, can reveal to his pupil the power of figures, or give him an idea of the wondrous secrets of time and space which they may be made to disclose. Any one with a quick eye, may teach a child to trace out on the map the outlines of the various countries, islands, oceans, painted upon it, or make him acquainted by name with the several zones and the parallels that bound them. But to put life and power into the teaching, to carry the child's imagination away from the printed and painted surface, the lines, figures, and mysterous symbols, to that which they represent—the grand real world in which he lives, with all its wonders and changes, one must have a far greater knowledge of the subject, than a child is able to receive.

To imagine that the actual necessities of the pupil, may with propriety limit the resources of the teacher, is to take a very narrow view of the subject of education, to form an unworthy estimate of the importance of the teacher's office. A teacher, knowing only the rudiments that he is expected to teach, and who is content to know no more, must fail in the *right* performance of a teacher's duty. He may announce facts, and explain processes, in as far as he is himself acquainted with them, but he cannot make visible to his pupils—because he cannot see himself—the principles upon which the value of a knowledge of these facts and processes entirely depends.

Besides—uninfluenced himself by the inducement to progress, which an enlarged knowledge supplies, he must fail to give to his pupils the impulse toward self improvement, which is of more value than any amount of imparted knowledge can be.

In this power to influence the minds of his pupils, lies the secret of a teacher's best success. Many of the greatest ornaments of the world of science and letters, might have lived on in obscurity, unconscious of their powers, but for the onward and upward impulse given to their intellectual faculties by some scientific or classical scholar occupying the humble position of a parish school-master. An enlarged knowledge is not the sole source of such influence, but it is as indispensable to its exercise, as are the moral and intellectual qualities which, in a teacher, command a pupil's respect. It will not avail for success where the gift of teaching is not, nor will it stand instead of moral fitness, or a true spirit of devotion to the work, but through it alone can natural gifts be made really available, as a means of intellectual and moral advancement to the children of the people.

Especially it is important that those entrusted with the education of the young, should be morally fit for the office. The relation in which a teacher stands to his pupils, implies more than the mere expansion or cultivation of the intellectual faculties. Directly or indirectly he must exert a powerful moral influence upon them. If not directly exerted for good, it must be indirectly exerted for evil. He can neither divest himself of this power to influence, nor of the responsibility which attaches to it.

They whose duty it is to decide as to the moral qualities necessary in a teacher, need not hint as to what those qualities must be, and even to name them might seem impertinent. There can however be no impertinence in asserting that a departure from the letter or spirit of the law having reference to these qualities, in deciding upon the fitness of individuals for the office, must have an injurious tendency. The standard of requirements in this respect, may be sufficiently high: it must be uniformly adhered to, if our Common Schools are to exert a healthful moral influence on the youth of our country.

That the Board of Examiners should raise the standard of requirements, is not all that is necessary to ensure properly educated teachers for our schools. It may be quite possible to make of the Board of Examiners, and the examination, a bugbear which shall be more powerful to discourage the timid, than to keep back the unprepared. The teachers themselves must have their eyes opened to the desireableness of greater attainments than any board is likely to require of them, in order that they may fill worthily, the honorable position at which they aim. They must prepare for it not merely that they may be able to pass creditably an examination more or less severe, but that they may be thoroughly acquainted with the subjects they mean to teach, and that they may ensure to themselves that mental discipline, necessary to the skilful dealing with the minds of others. They must cultivate a love of knowledge for its own sake, if they hope to excite this love for it in their pupils.

They must have an exalted idea of the teacher's office, not as reflecting dignity on those who hold it, but as requiring much at their hands. It must not be assumed lightly, nor from unworthy motives. It must not be coveted as an easy and pleasant position. A pleasant position it is, to one who loves the work to which it introduces him, but it is an easy—an un-laborious position to none. Even when use and wont, and a consciousness of fitness for his sphere have removed out of the teacher's way the obstacles which at first encumber his path, his task is still a laborious one, requiring watchfulness, patience, firmness, and great power of endurance mental and physical. To one who has no aptness for teaching, no love for it, no success in it, teaching is a most painful drudgery.

The office of teacher must not be assumed in a mercenary spirit—just so much time and teaching given for so much money received. He who takes it in such a spirit will fail every way. He will disappoint, and he will be disappointed. If he is consciencious in the discharge of his duties, and at all successful in his work, he may go on with pleasure to himself and others for a while. But when the day of reckoning comes—when the balance is struck, he will find that the hard cash justly considered his due, will by no means remunerate him for the labor bestowed. He will say, "With less wear and tear I might have earned more at some other work," and it will be the truth. The outlay of the teacher is not of a kind that can be estimated in dollars and cents, and dollars and cents, even were they more liberally awarded to the teacher than they are among us—could never make to him a full and satisfactory remuneration.

Do not let me be misunderstood. We live in a world in which to the greater number of us, our daily bread must, in one sense, be the first consideration. To suspect as mercenary all who look to the profession of teaching as a means of obtaining a livelihood, would be foolish, as it would be unjust. Of a more sacred profession it is said "They who minister at the altar shall live by the altar." A teacher may with propriety permit himself to look to his profession as a means of obtaining honorable bread. But he must assure himself that if to obtain bread be his sole motive in choosing his profession he need never hope to become a successful teacher in the highest sense. His success must be the result of earnest self-denying labor which bread cannot pay. Unless he so loves his work, or is so impressed with its importance that he is willing to accept success in it, as the best part of his remuneration, he will be disappointed.

Upon this part of the subject—the fitness of teachers for their work—one might enlarge indefinitely. In one sense it may be said to cover the whole ground. As soon as the majority of our common schools shall be under the direction of teachers who have undertaken the work in a right spirit, from right motives, who have thoroughly prepared themselves for it and earnestly devote themselves to it, then shall we see the object aimed at by the system in a fair way to be effectually attained.

Again, measures should be taken to make the office of teacher in our Common Schools a permanent one. In passing from the care of one inexperienced person to that of another, schools must suffer, both as to instruction and discipline. Even when the skill and attainments of the successive teachers may be undoubted, this frequent change must interfere with the progress of pupils. Time must be lost before the stranger can ascertain their standing, so as to class them properly. When his mode of teaching differs from that of his predecessor, it must be some time before they grow accustomed to it, so as to respond to his efforts in their behalf. Progress must be irregular and fitful. The knowledge thus acquired will be fragmentary, and easily forgotten. Nothing can be well learned, and what is worse no proper habits of study can be formed, no love of study cultivated.

With regard to the teachers, they can hardly be expected to throw themselves heartily into a work, which three or four months may limit. Half the time will be over before they find themselves thoroughly engaged in their duties, or before they see any real progress in their pupils. To acquire a reputation as a skilful and successful teacher, is not of course the highest motive that can actuate one in the performance of duty, but it is still a legitimate motive. A teacher who looks forward to the close of the term as the end of his connection with his pupils, can have little hope that his ambition in this respect will be gratified. The progress of a school from term to term may and ought to be marked, but it is not in the first term that the progress is greatest. In those schools, in which every term is a teacher's first, the progress can scarcely be so evident, as to reflect honor on either teacher or pupils.

Besides, even on the minds of conscientious teachers, the knowledge of the transitory nature of their connection with their pupils, must, in another way, re-act unfavorably. It will not be unlikely to tempt to an evading of difficulties both in the government of their pupils, and in their instruction. It is often easier to endure passively what is disagreeable, or even what is positively painful or wrong, than to take a firm stand against it, and the thought that a few weeks or months will put an end to the vexation as far as he is concerned, will often to a teacher prove a temptation to overlook what merits reproof in his pupils. The injurious effects of such a course must be too apparent to require to be enlarged upon here.

Notwithstanding the very evident disadvantages which attend these frequent changes, the cases in which teachers continue year after year in the same school, are the exceptions, not the rule. Indeed the cases are rare in which young persons are found preparing themselves for the office, with any idea of making it a permanent one. No such thing seems to be expected from them. It seems to be understood, that a young man, when his own school days are over, may very well spend a winter or two in teaching, until he shall decide as to his future occupation, or in order that he may obtain means to pursue his professional studies. A young woman teaches three or four months in summer in order that she may gain money with which to dress herself neatly during the rest of the year, and it is all as it should be with our Common Schools in the opinion of people generally.

But unless that is true with regard to the profession of teaching, which is true of no other profession, that the skill and experience which is the result of long practice cannot be made available in securing success in it, all this should be quite otherwise. Our Common Schools can never become the power for good, which they might be made in the country, until the teacher's office is made a permanent one.

With this frequent change from school to school, no doubt the restlessness and incompetency of teachers may have something to do. Young people becoming teachers, with no just sense of the responsibilities which they assume, or of the difficulties which they must encounter, grow impatient of the circumstances in which they have placed themselves, and choosing to believe, that what is unpleasant in their position, arises from something peculiar to the school or neighborhood, rather than from their own incompetency, they seek new situations, only to find new troubles. Higher requirements on the part of the Board of Examiners, would tend to correct the evil in as far as it is thus occasioned, by discouraging young persons who desire the office of teacher only that they may escape from the performance of distasteful duties at home, or that they may enjoy what seems to them a more desirable social position than they could otherwise occupy.

But the other circumstance out of which these frequent changes seem to arise—the fact that few enter upon the work of teaching, with any thought of making it their life's work—cannot be so easily dealt with. The cause must be apparent to all. It is not surprising that few are found willing to devote their energies to a profession however suited to their abilities and tastes, which offers no reasonable prospect of affording a livelihood. This ought not to be true, of even the *Common* Schools, in the long settled districts of Canada, but true it is.

The existence among us of prosperous academies and colleges, is evidence that the cause of education has advanced with the material prosperity of the country, but it is chiefly as regards these higher institutions of learning that the advance is apparent. Many of the drawbacks incident to the schools of a new country—the short summer or winter term—the giving place of one chance teacher to another—the "boarding round" system as it is called, and many other defects in arrangement, still cling to our Common Schools generally, and unite to hinder their efficient working.

It is time that these drawbacks were removed from the schools of the long settle districts. It would be a step in advance if they could be kept open longer each season. A prospect of being employed during the greater part of the year, would, even at the present rate of remuneration encourage suitable persons to qualify themselves for the work of teaching. But in schools generally, the rate of remuneration ought to be increased.

While it is important that teachers should guard against a mercenary spirit in seeking the office it is equally important that their employers should avoid that spirit of false economy which inclines too often to cheapen a teacher's services. It is true of teaching as it is true of other things—that which is valuable must be paid for. And it is true also, that the cheapest teachers, like other cheap wares, often prove the dearest in the end.

Let it be repeated here. Our Common Schools will become the power for good in the country which they ought to be, when the majority of them shall be under the direction of faithful and efficient teachers, and that happy day will not be very distant, when the office of teacher is made a permanent and remunerative one.

To be continued.

ARITHMETIC.

(Continued.)

At every stage of the pupil's advancement in arithmetic the following three things should never be lost sight of: 1st. A correct knowledge of the principles of numbers. 2nd. How to work numbers with celerity and correctness. 3rd. Their multifarious applications.

These three things should be perseveringly attended to, from the very beginning of arithmetical training.—In doing this the language and manner of the teacher should be such as to suit the scholar at each degree of advance, and the progressive increase of his knowledge. At first, to be successful, there must be great plainness, so as to make the language level with his capacity; and the utterance should be distinct, bland and telling. This is a part of the art of teaching far too little studied by our educators. Yet it is one of the most special, and of the very first that should be particularly studied. Unless a teacher's language be studiously accommodated to the capacity and knowledge of his pupil, how can he expect success? Of what value is instruction if imparted in language not understood, or but very imperfectly comprehended? Of what value is an explanation, or an illustration, if the master's ideas are so expressed as not to bring the thing explained within the reach of the child's capacity, or if his knowledge of the subject, a part of the subject under illustration, is *not sufficient* to make the illustration clear to him—so well understood as intelligently to enable him to do the thing himself?—How often happens it that the use of a single word not well understood or part of an explanation out of place, or not commenced at the proper starting point, perplexes the student, and mystifies what was intended to be made plain—comprehensible?—Verily teaching and expounding are of no avail, except so far as they benefit the scholar, throw light on his path, and enable him, by his own steady efforts, to profitably advance.—Teachers, look well to your language, to your words,—to their choosing and using. Study well the proper starting points of every part of your instructions. All the parts of instruction should have their legitimate sequence —each brought up and carried on in its right place.

Remember that the teacher's language requires a teaching character—as well as his mind a teaching mould. However distinct may be our views, however vivid our conceptions, however correct and extensive our knowledge of the subject we teach, how often do we fail in calling up words, and momently divising forms of expression faithfully to pourtray our thoughts and sentiments, enabling us successfully to effect our object? This is a thing of daily occurrence with the best educators: much more must it be so with those beginning the profession.

Let us now proceed and give a few farther hints on teaching the fundamentals of Arithmetic.

Pupils should have now reached a stage to admit of giving a still farther variety of examples. The clearer and more correct their knowledge of the properties of numbers is, the better will they be prepared for the business applicative parts of arithmetic. It is very important that, as they advance, as much light as possible be thrown on the relations of numbers in multiplying and dividing them. Rightly to understand and masterly to know them in calculating, is of vast advantage to them. The more their knowledge on these various relations is enlarged, the more are their minds brought under the guidance of reason, the more does arithmetic become to themselves a training instrument; and the more does their own independent working capacity strengthen, —thus hastening on development and a rational well-grounded advancement.

Multiplication and Division.

The relations between multiplier, multiplicand, and product; and between divisor, dividend and quotient should by little and little, be expounded and examplified to them—making each of the illustrations suit each stage of mental development and acquired knowledge. Let me direct attention to a few of the most suitable at this stage.

1. To increase or lessen the products of numbers, we increase or lessen the multipliers. For example. Multiplying 32 by 4 gi·es 128. Now it is evident that multiplying by 3 times 4, or 12, would give three times this answer, i, e, 384; $32 \times 12 = 384$. Again, if we lessen the multiplier 4 by 2, we have $32 \times 2 = 64 = \frac{128}{2} = 64$ equal to half the first product. Illustrate these relative properties till well understood, and the scholars are able readily to work processes. Begin with numbers which their minds can comprehend: as 6 by 2, 8 by 5, 10 by 6, &c. and reason on each example, till, in turn, they can correctly reason to you. Then give them examples to be worked, and to exercise their own minds upon them, that they may be able to explain to you when called up. Then, when this exercise is well understood, how the product is affected by increasing or diminishing the multipliers, show by illustrations how it is increased or decreased by increasing or decreasing the multiplicand, as follows:

3) $24 \times 5 = 120$

$$8 \times 5 = 40 = \frac{120}{3} = 40 = \tfrac{1}{3} \text{ of the product of 24 by 5.}$$

Again: $24 \times 5 = 120$, and 24 increased by $3 = 72$, and multiplied by 5 is $360 = 120 \times 3 = 360$. Multiplied $425 \times 12 = 5100$; double the multiplicand $425 = 850 \times 12 = 10200 \div 2 = 5100, =$ to the first product.

Where they well understand how products are thus increased and decreased in proportion to the increase or decrease of the factors; show that if one factor is increased as many times as the other is diminished the product remains unaltered. Ex. 9 multiplied by $6 = 54$; the double of 9 is 18; and the half of 6 is 3: 18 multiplied by 3 is 54, the same product; for as 9, the multiplicand, is increased so the 6, or multiplier, is decreased. Ex. Multiply 25 by 14; the product is 350; increase the multiplier 5 times, and decrease the multiplicand 5 times; the product will be the same, viz., 350: for 5 times 14 is 70, and the fifth of 25 is 5. 70 multiplied by 5 is 350, the same product as 25 multiplied by 14.

Farther Exercises.

N. B. Place a factor in each of the vacant spaces, so that the products shall be equal.

$5 \times 9 = \frac{9}{3} \times (\quad)$; $16 \times 12 = (\quad) \times \frac{12}{4}$; $49 \times 3 = \frac{49}{7} \times (\quad)$.
$18 \times 6 = 2 \times 6 \times (\quad)$; $36 \times 8 = \frac{36}{4} \times (\quad)$; $350 = 17 = \frac{350}{10} \times (\quad)$.

2. Observe that to obtain the same quotient in dividing by different divisors, both the divisor and dividend, must be increased or diminished by the same figures, i. e, they must be equally increased or decreased; as may be required: for example $72 \div 12 = 6$ quotient. If I double the 72 I must also double the 12 to get the same quotient, viz. 6. If I lessen the 72, dividing it by $4 = 18$, the divisor 12 must, to get the same quotient, be also divided by $4 = 3$; and $18 \div 3 = 6$, the same quotient, as $72 \div 12$ gives.—Again, if I wish to give a multiplicative increase to the quotient 6, I have to give a proportionate decrease to the divisor, as follows: dividing 96 by 8 gives 12 quotient; I wish to increase the quotient 12 three times $= 36$: to get this quotient by the same dividend, (96,) the divisor must be 3 times less, namely $\frac{8}{3} = 2\frac{2}{3}$; and 96 divided by $2\frac{2}{3}$ gives 36, the quotient required; or the dividend may be increased, instead of the divisor decreased, by three, thus $96 \times 3 = 288 \div 8 = 36 =$ the quotient required.

3. In every Division sum the dividend is the product, of which the divisor and the quotient are the two factors.—

In multiplication, multiplier × multiplicand = product;

In division, quotient × divisor = dividend: therefore every truth which can be asserted of the parts of a multiplication sum, can be asserted in another form which will be applicable to division.

Example.

mult. mult.

1. $32 \times 7 = 224$ product, in multiplication.
pro. $224 \div 7$d $= 32$ multiplicand; and
$224 \div 32 = 7$ the divisor,

2. $42 \times 12 = 504$ product.
$504 \div 12 = 42$ multiplicand; and
$504 \div 42 = 12$ multiplier.

3. $9936 \times 23 = 228528$ product.
$228528 \div 23 = 9936$ multiplicand; and
$228528 \div 9936 = 23$ multiplier.

Such exercises as these, if well explained, will help much in leading scholars to a correct knowledge of the theory of processes. Every step of a process has its principle; and it is the duty of the educator to show them how the principle, worked, produces results; how the numeral truth, that $3 \times 9 = 27$; and how the reverse processes $27 \div 9 = 3$; and $27 \div 3 = 9$, have all a processal agreement. For if 27 be the sum of three nines; it must also be the sum of nine threes. Analyzing 27 by 9, gives $9 \times 9 \times 9 = 27$; and by 3 gives $3 \times 3 \times 3 \times 3 \times 3 \times 3 \times 3 \times 3 \times 3 = 27$. Or, taking a larger number, say 9936, to be increased 23 times gives a result of 228528. This product decreased 23 times by 9936 is exhausted—proving the process to be correct; otherwise; 228528 divided by 23, gives 9936; or by 9936, gives a quotient of 23.

A few such examples will lead them to see how processes in multiplying and dividing check and prove each other.

But I would strongly recommend, accustoming them to prove the working of questions or of processes at each step of advance. This is a much better way than proving the ultimate results of processes. It is carrying the proof along with the work. To illustrate this, take the following examples:

42769
75

5) 213845 product
42769 proof

7) 299383 product
42769 proof

3207675 ans.

2993830 proof of adding.

75) 3207675 (42769
$300 \div 4 = 75 =$ proof of the multiplying
$20 + 300 = 320 =$ do. of the subtracting.
207
$150 \div 2 = 75 =$ do. of the multiplying.
$57 + 150 = 207 =$ do. of the subtracting.
576
$525 \times 7 = 75 =$ do. of multiplying.
$51 + 525 = 576 -$ do. of the subtracting.
517
$450 \div 6 = 75 =$ do. of multiplying.
$67 + 450 = 517 =$ do. of subtracting.
675
$675 \div 9 = 75 =$ do. of multiplying.

In these examples I have put down the different steps of proof for plainness. In training pupils this is not necessary. By a little practice they will be able to test each step at sight—writing no figures, except in very large operations.

JOHN BRUCE,
Inspector of Schools.

(*To be continued.*)

Always in Trouble.

There is a variety of gifts in teaching; and most good teachers are characterized by some peculiar qualification which is mainly the secret of their success. And not only does this variety hold good in regard to the means by which teachers succeed, but it also pertains to their deficiencies and faults which prevent success. Some are wanting in firmness and decision; others, in kindness and sympathy. Some have neither judgment nor tact; others are cruel, or indolent, or wanting in enterprise. And thus it would be very easy to make the list a long one. But of all the faculties which characterize teachers, we know of no one whose legitimate fruit, sooner or later, is so surely failure, as what may appropriately be called the faculty of always being in trouble. We do not mean to say that teachers are the only persons who have this faculty. Far from it. It is found in people of every calling in life; but in occupations where its possessors come less in contact with the public and their interests, and whose duties are less delicate, it does not always become so manifest nor produce consequences so lasting and injurious, as in the case of the teacher.

This faculty may not, perhaps, be defined with precision in mental philosophy, nor in the Phrenological Guide, but it surely exists. Of this, fellow teacher, you probably have not the slightest doubt. You have known such teachers. If there is any one thing they can do better than another, it is, to use a common, but a very meaning expression, to get into hot water. It is their forte; and they certainly appear to be very ambitious to magnify their calling. Now it is a very unfortunate combination of qualities and habits that constitutes such a character. It is a constant source of unhappiness to the teacher, making his life one continued scene of fretfulness, trouble, and dissatisfaction; and keeping up a state of discontent and turmoil in the school and neighborhood. And it is the more to be regretted, from the fact that it is all unnecessary and easily avoided by the exercise of a moderate degree of discretion and common sense.

There are teachers who have very exaggerated and very ridiculous ideas of the authority with which they are vested, upon becoming the presiding geniuses of the schoolroom. To make a display of that authority, and to create a sensation, seem to be the leading object of their work. It almost seems as though they supposed schools were established to give them an opportunity to show that they are masters, and that they wield the sceptre in their little kingdoms. Such teachers will fail of doing a good work, and will have trouble for various reasons. They have no true conception of their duties as teachers, and cannot, therefore, discharge them acceptably. In the discipline and management of their schools they will overdo, in every sense of the word. That will engender unkind feelings on the part of the pupils, and make antagonists of those who ought to be friends and co-workers. The malicious and the mischievous will feel irritated and provoked, and will accept the teacher's indiscretions and officiousness as a challenge for a trial of skill and mastery. Even the best of pupils will gradually, and sometimes unconsciously, assume an attitude which, if not hostile, is certainly wanting in cordiality. In such circumstances, the relation between the teacher and pupil promises little good, but much harm. Not only will that degree of harmony andj good feeling requisite for a successful school be wanting, but aversion and hostility will continually exist. This will greatly impair and generally destroy the usefulness of any school. It is very true, we admit, there often will be conflicts in school, and the teacher will be obliged to grapple with opposition and insubordination, and to put them down effectually. But no teacher can afford to be continually at war with the adverse elements of his school. The campaign against them may be vigourous and decisive, but it should not be a protracted one. If a peace cannot be conquered speedily, it will be better to change tactics or generals.

This class of teachers are very frequently affected with jealousy of any interference, real or imaginary, with their rights and authority. Of course they are on any thing but pleasant terms with school committees, and the parents of their pupils. Not unfrequently there is a state of mutual recrimination and backbiting. Now, in the first place, every person who proposes to enter the school room as a teacher, should previously understand fully the relation, duties, and rights of committees, teachers, and parents, respectively, as defined by the law

of the State where employed; and in the next place, such persons should know that it is possible for a teacher to be supreme in the school room, and at the same time to recognize the rights of other parties, so far as they actually exist, and to respect them accordingly. The teacher who is unable to reconcile the existence and compatibility of the rights of others with his own, may, and most likely will, often quarrel with the school committee or superintendent; while the one who fully understands and acquiesces in the relation of all parties will, with proper discretion, seldom find occasion for any considerable trouble in that direction. We know very well that all kinds of people have the charge and oversight of schools; but it cannot be denied that they are generally men of intelligence who share to some extent at least, the public confidence; and we strongly incline to the belief that they are, for the most part, as easy to deal with as any class of our fellow men.

We earnestly beg of you, therefore, fellow teacher, if you have any trouble with your committee, not to prosecute a quarrel until you have seriously enquired who is the agressor; and also whether you are entirely free from a foolish and perhaps groundless suspicion of interference, when no interference is attempted or meditated. Remember that many people suffer more from the anticipation and dread of troubles that never come, than from all the troubles that actually take place.

A similar spirit of jealousy is often exhibited in reference to the interference of parents. We are free to acknowledge that many parents are meddlesome in school matters, assuming not only to advise the teacher, but also to dictate to him in the discharge of his duties. The provocations from this are frequently such as to require great discretion and magnanimity to rise above them. Bear in mind that parents have a peculiar interest in their own children, and that it is one of the weaknesses of many pareuts, that they deem it necessary to superintend, and to have a voice in all that is doue for their children by others. Furthermore, schools, and especially public schools, are considered as a kind of public property in the management of which every one has a right to take part. Such being the fact, it is very natural that injudicious parents should often seem altogether too officious in their intercourse with teachers aud schools. Unpleasant as such intermeddling is, it need not generally be a source of much trouble or anxiety to the teacher. It is to be treated on the let-alone-principle. If resented or allowed to bring on disputes or altercations, it surely will increase tenfold; for a testy temper and angry words in a teacher are a sufficient provocation for fault-finders to do their worst. It is by such fuel that the flame of contention is usually fanned to its intensest heat. Not so, however, if it is met with an unruffled temper and with respectful silence. It can not flourish under neglect. It is a good rule to listen calmly and attentively to all the advice, and abuse even, that may be offered, or heaped upon you; and then, avoiding immediate action if possible, to follow your own judgment.

Many teachers very foolishly bring much trouble upon themselves by injudicious talk in school, or before their pupils elsewhere, about their parents. A teacher of some promise, occupying a good situation, had occasion to reprove a lad, and to make some changes in his studies which his own good and that of the school seemed to require. The mother of the boy injudiciously made some petulant remarks about it, but would probably propably have forgotten the whole affair in a month, had the matter ended there. But her remarks found their way to the teacher's ears, whose want of judgment allowed him to bring the matter up before the school, and to indulge in violent language, abusing the boy, his mother, and meddlers in general. The result was he lost his situation, and thereby received a just reward. Pupils should never hear from their teachers an unkind or disrespectful word about their parents.

It should be a principal object with the teacher, to keep out of trouble and to live on terms of peace and cordiality with pupils and parents, and with all others concerned. This must be done by the exercise of prudence and good judgment, and by a desire to deal fairly and justly with all. Care must be taken, however, not to vacillate where promptness is required, nor to shrink from the line of duty; for where that plainly leads he must go, cautiously, indeed, but fearlessly. But most of the troubles which this class of teachers encounter may be avoided by a determination to keep clear of them, as we have hinted above. Learn a lesson from the folly of the serpent, which is not always "wise." When a coal of fire is held towards one of our common field snakes, the spiteful reptile darts its forked tongue about it, and then, in wrathful folds, encircles it with its whole body. Result: A burnt offering uncalled for and ineffectual. So do not thou, fellow teacher. Repress the controversial element in your character; let your policy be pacific but firm; and by your fidelity and persistent magnanimity win the good-will and approbation of pupil and patron. A. P. S. —*Connecticut School Journal.*

OFFICIAL NOTICES.



NOMINATIONS.

LAVAL NORMAL SCHOOL.

His Excellency the Governor General in Council was pleased, on the 13th December, to appoint Daniel McSweeney, Esquire, English Teacher in the Model School annexed to the Laval Normal School and Adjunct Professor in the Normal School, *vice* Andrew Doyle, Esq. resigned; and also to appoint J. B. Cloutier, Esq., Adjunct Professor in the Laval Normal School.

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ERECTIONS &c. OF SCHOOL MUNICIPALITIES.

His Excellency the Governor General in Council was pleased, on the 12th December last, to detach from the Township of Morin, in the county of Argenteuil, the 7th, 8th, 9th, 10th and 11th ranges, and to annex the same to the School Municipality of Beresford.

His Excellency the Governor General in Council was pleased, on the 11th January last, to amend the Order in Council of the 26th July, as follows:

To detach from the school municipality of St. Irénée, in the county of Charlevoix, the concession known as Ste. Magdeleine, extending from the land of Vital Bouchard to the land belonging to Louis Maltais, exclusive, and to annex the same to the School Municipality of Malbay, in the said county.

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DIPLOMAS GRANTED BY BOARDS OF EXAMINERS.

MONTREAL BOARD OF CATHOLIC EXAMINERS.

1st Class Elementary (*E*).—Mr. Thomas Levan; (*F*) Miss Marie Vitaline Demers.

—

QUEBEC BOARD OF PROTESTANT EXAMINERS.

1st Class Elementary (*E*).—Miss Jane McKenzie.

2nd Class Elementary (*E*).—Messrs. James A. Hume, Neil John McKillap, Francis Reynolds; Misses Margaret Brodie, Sarah Johnston, Margaret McKillap, Mary McKillap.

1st to 8th Nov. 1864.

D. Wilkie,
Secretary.

—

RICHMOND BOARD OF EXAMINERS.

1st Class Elementary (*E*).—Miss Hanna Armatage; (*F & E*); Miss Mary Ann Armstrong; (*F*) Misses Marguerite Labonté, Luduile Gervais and Marie Brady.

2nd Class Elementary (*F*).—Miss Philomène Marcotte.

2nd Aug. 1864.

1st Class Elementary (*E*).—Miss Mary Ann Morrill; (*F*) Misses Philomène Champoux and Mathilda Bouthillette.

2nd Class Elementary (*F*) Misses Louise Vigneault, Julie Belisle; (*E*) Misses Adelia Gilman, Flora Shaw, Margaret Cassidy, Sophia Daying, Josephine E. Smyth, Mary Ann Hall, Lelia L. F. Rice; Mrs. Susanna Nelson *Hull*; and Mrs. Orpha Elizabeth Turner *Hammond.*

1st Nov. 1864.

J. H. Graham,
Secretary.

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DONATIONS TO THE LIBRARY OF THE DEPARTMENT.

The Superintendent acknowledges with thanks the following donations to the Library of the Department.

From Henry Judah, Esq. Commissioner on Seignorial Tenure, *Cadastres abrégés des seigneuries de Québec*, 2 vols. *Cadastres abrégés des seigneuries de Montréal*, 3 vols. *Cadastres abrégés des seigneuries des Trois-Rivières*, 1 vol. *Cadastres abrégés des seigneuries de la Couronne*, 1 vol.

JOURNAL OF EDUCATION.

MONTREAL (LOWER CANADA), JANUARY, 1865.

To our Subscribers and the Contributors to the Teachers' Savings Fund.

We have to request that our subscribers who have not yet paid up will send their remittances as soon as possible to A. de Lusignan Esq., Clerk of Accounts and Statistics, Education Office, who will also receive all Premiums due on the Teachers' Savings Fund.

In sending money by mail, Postage Stamps should be used when the amount is less than one dollar. Teachers who receive the Journal for half a dollar may club together to send their remittances whenever they can conveniently do so. Coin should not be sent by letter as loss through increased postage is thereby occasioned.

We have much pleasure in recording the fact that during the year just ended many Boards of Commissioners have subscribed to the Journal for the schools under their control.

Subscribers to the Savings Fund are reminded of the necessity of paying all Premiums during the year to which such Premiums apply. Premiums for 1864, now overdue, shall nevertheless be still credited provided they be sent within a reasonable time.

All Teachers should contribute to the Savings Fund, and also subscribe to the *Journal of Education*. The reasons that might be urged in support of the first part of this recommendation are so obvious that they will naturally suggest themselves; to recapitulate them here would, therefore, be superfluous. As to the *Journal of Education*, we may say that the information to be found in its columns is of the highest practical importance to all teachers, and none should be without it.

Notices of Books and Publications.

THE CANADIAN JOURNAL OF INDUSTRY, SCIENCE AND ART; Printed for the Canadian Institute by Lovell and Gibson, Toronto.

We have received the November number of this excellent scientific quaterly. It contains an article by Professor Wilson on the Physical Characteristics of the Ancient and Modern Celt of Gaul and Britain; another on Thallium, by H. C.; a bibliographical review, a translated article on Plants and the Atmosphere, from *La Revue des Deux Mondes;* and Meteorological Tables and observations for Toronto.

The subject of which Professor Wilson treats in this number is one much in vogue at present with *savans* in both hemispheres. As all the world knows, craniology has risen to an important place in modern science; it is now, in fact, one of the favorite branches studied by naturalists and especially by *anthropologists.* Accordingly, on all sides, the learned are digging. Ruins, catacombs, long forgotten cemetries, are ruthlessly upturned and ransacked for those mouldy treasures which are to solve the great ethnical problems of the day. While investigating and comparing the peculiarities of *crania* of various races inhabiting the British Isles, the idea has been entertained in scientific circles that if the pure Celtic type could be definitively recognized and separated from its modified forms and sub-types, a promising way would open to the settlement of many questions touching the early history and migratory movements of this ancient people, and thence possibly to ethnological enquiries into the history and characteristics of pre-existing races. Unfortunately, however, the subject is beset with difficulties. It is the opinion very generally received among ethnologists that the pure Celt does not now exist free from admixture with other races; and it therefore follows that if the unmixed Celtic skull can be identified at all, it can only be done through the scientific classification of *crania* of past generations. Hence the *furor* adverted to above.

But if investigations into the craniological peculiarities of ancient peoples be attended with so much inconvenience and trouble, science has hit upon a truly expeditious and agreeable method of examining contemporary heads. What, indeed, could be more natural under the circumstances than to have had recourse to that useful member of a well regulated community—the hatter? Let us not however anticipate Prof. Wilson in his remarks on this subject:

" The hatter in the daily experience of his business transactions, necessarily tests the prevalent form and proportions of the human head, especially in its relative length, breadth, and horizontal circumference; and where two or more distinct types abound in his locality, he cannot fail to become cognisant of the fact. One extensive hat manufacturer in Edinburgh, states that ' the Scottish head is decidedly longer, but not so high as the English. In comparison with it the German head appears almost round.' But comparing his scale of sizes most in demand, with others furnished to me from Messrs. Christie, the largest hat makers in England, the results indicate the prevalent Scottish size to be $23\frac{3}{8}$ inches; four of this being required for every two of the next larger and smaller sizes; whereas in assorting three dozen for the English trade, Messrs. Christie furnish four of $21\frac{1}{2}$, nine of $21\frac{3}{4}$, ten of 22, and eight of $22\frac{3}{8}$ inches. Mr. Rogers, of Toronto, in assorting three dozen, distributes them in the ratio of five, seven, nine, and five to the same predominant sizes, and allows four for the head of 23 inches in circumference, the remainder being in both cases, distributed in ones and two between the largest and smallest sizes, ranging from $23\frac{3}{4}$ to $20\frac{3}{4}$ inches. The summary of inquiries among the principal hatters of Boston is as follows: ' Larger hats are required for New England than for the Southern States. To New Orleans we send $20\frac{5}{8}$ to $22\frac{7}{8}$; and to New Hamsphire $21\frac{3}{8}$ to 23 inches.' One extensive New England manufacturer adds: ' New England heads are long and high; longer and higher than any European heads. British heads are longer than Continental. German and Italian heads are round. Spanish and Italian very small.'

" Let us now see if this experience acquired in the daily observation of the trader and manufacturer will yield any available results in reference to our present inquiries. An ingenious instrument, known by the name of the *Conformiteur*, was brought into use in Paris, I believe about twenty years since, and is now employed by many hatters, on both sides of the Atlantic, for the purpose of determining the form and relative proportions of the human head, so far as required by them. The instrument fits on the head like a hat; and, by the action of a series of levers encircling it, repeats on a reduced scale, the form which they assume under its pressure. By inserting a piece of paper or thin card board, and touching a spring, the reduced copy is secured by the impress of pins attached to the ends of the levers.

* * *

" Taking advantage of the precise data furnished by the *Conformiteur*, I have availed myself of the peculiar facilities which Canada supplies for instituting a comparison between the diverse races composing its population. Upper Canada is settled by colonists from all parts of the British Islands. In some districts Highland, Irish, German, and ' Coloured ' settlements perpetuate distinct ethnical peculiarities, and preserve to some extent, the habits, and usages, and even the languages of their original homes. But throughout the more densely settled districts and in most of the towns, the population presents much the same character as that of the larger towns of England or Scotland, and the surnames form in most cases the only guide to their ethnical classification, In Lower Canada the great mass of the population is of French origin, but derived from different departments of the parent country; of which Quebec is the centre of a migration from Normandy while the district around Montreal was chiefly settled by colonists from Britanny. The French language, laws, religion, and customs prevail, preserving many traits of the mother country and its population, as they existed remote from the capital of the Grand Monarque, and before the first French Revolution. The establishment of the seat of the Provincial Government at different times in Montreal and Quebec, and the facilities of intercourse between the two cities, must have helped to mingle the Norman and Breton population in both. Nevertheless, the results of my investigations tend to show that a striking difference is still recognisable in the predominant French head-forms of the two cities.

" My first observations, with special reference to the present inquiry, were made at Quebec, in 1863, when, in co-operation with my friend Mr. John Langton, I tested the action of the conformiteur on heads of various forms, and had an opportunity of examining and comparing nearly four hundred head-patterns of the French and English populations. As each of the patterns had the name of the original written

upon it, a ready clue was thereby furnished for determining their nationality. Since then, in following out the observations thus instituted, I have carefully examined and classified eleven hundred and four head-shapes; including those of two of the principal hatters in Montreal, and of one in Toronto. In testing their various differentiæ, I have arranged them by correspondence in form; by common origin, as indicated by French, English, Welsh, Highland, Irish, and foreign names; and by predominant malformations in those markedly unsymmetrical. The first noticeable fact in comparing the head-forms of the Quebec population was that they were divisible into two very dissimilar types: a long ovoid, and a short, nearly cylindrical one. This is so obvious as to strike the eye at a glance. I accordingly arranged the whole into two groups, determined solely by their forms, without reference to the names; and on applying the latter as a test, the result showed that they had been very nearly classified into French and English. In all, out of nearly a hundred head-forms marked with French names, only nine were not of the short, nearly round-form; and no single example of this short type occurred in one hundred and forty-seven head-forms bearing English names. A more recent examination of patterns from Montreal led to a very different result. There, where out of the first fifty English head-forms I examined, one example of the short globular type occurred; out of seventy French head-forms (classified by names,) only eleven presented the most prevalent French, head-type of Quebec. But the French head of the Montreal district though long, is not the same as the English type. It is shorter, and wider at the parietal protuberances, and with a greater comparative frontal breadth than what appears to be the Celtic sub-type of the English heads, though also including some long heads of the latter form. So far, therefore, it would seem a legitimate inference from the evidence, that the brachycephalic and nearly globular head of the Quebec district is the Franco-Norman type; while the longer French head of the Montreal district is that of Brittany, where the Celtic element predominates."

Robertson.—The Galt prize Essay—An essay on Common School Education; By Miss Margaret Robertson, Sherbrooke, 1865, 26p.

We begin in this number the reprint of this very interesting essay. It is well written and is alike creditable to the Teachers' Association, the author and the generous donor of the prize.

Webster.—*An American Dictionary of the English Language.* By Noah Webster, LL. D. Thoroughly revised, and greatly enlarged and improved, by Chauncey A. Goodrich, LL. D., etc., and Noah Porter, D. D., etc., Springfield, Mass.: G. & C. Merriam. Royal 4to. pp. lxxii., 1768.

This great standard work has again passed through another edition, revised, enlarged and embellished. Lexicographers, orthoëpists and philologists deeply versed in their respective departments of linguistic science, have been employed in removing the dust of nearly forty years from the well-earned laurels of Noah Webster and in adding fresh lustre to their imperishable glory. Not only have imperfections and blemishes disappeared before the indefatigable exertions of his revisors, but the Herculean task of remodelling the entire work has been successfully accomplished, the celebrated *definitions* even—wherein consists Webster's acknowledged superiority—having been rendered more terse and unimpeachable. Few persons not practically acquainted with the business of preparing works of reference for the press and with the *minutiæ* of the Editor's duties can form an accurate idea of the immense amount of labor involved in the reconstruction of a modern quarto dictionary. Besides what may be properly designated as the natural changes continually occurring in a living tongue, the uninterrupted march of science necessitates the constant coining of strange expressions that not only

"Would make Quintilian gape and stare,"

but startle Dr. Johnson himself out of all sense of propriety. Innovation too, the bugbear of lexicographers, is also constantly at work undermining the very pillars of the language. It is to no purpose that against its incessant assaults, all the classic volumes in the vernacular are heaped up into a rampart, huge as the Great Wall of China and almost as worthless for defensive purposes. The tide of neologism cannot be stayed. As even the most fastidious dictionary can be no more than a mere reflex of spoken language, it must perforce submit to usage and note down popular eccentricities. Accordingly we have, in the work now before us, the formal though qualified recognition of such verbal *parvenus* as *Skedaddle*—an expression by-the-by said to be of Swedish or Danish origin and not of classic birth as learned essays have been written to prove.—It must not however be inferred from this that all neologisms, however whimsical, have found a place in this revised edition; on the contrary, unauthorised or lawless expressions have been as far as possible excluded, yet its vocabulary includes 114,000 words, or 10,000 more than are to be found in Worcester.

Notwithstanding the general excellence of Webster's Dictionary; it is undeniable that in several important respects it was susceptible of improvement. Some of the imperfections here alluded to were inherent in the work itself, others were due to the changes brought about by time. These objectionable features the present owners of the copyright have spared no pains nor expense to remove effectually. In the department of etymology the recent investigations of philologists had left the labors of Dr. Webster—learned as they undoubtebly, were in his day—at the very threshold of the science. To supply this deficiency, the services of Dr. Mahn, a distinguished comparative Philologist of Prussia, were retained and the result of five years of unremitting labor on his part are now before the public. The general revision of the whole work was conducted under the immediate supervision of Prof. Goodrich until the death of that gentleman in 1860, when Prof. Porter succeeded him. The staff of collaborators and assistants whose services have contributed to the success of the present undertaking included men eminent in almost every department of science, art and literature. We regret that we have not space to bestow even a passing remark on their respective labors. It must suffice to say that to Prof. Dana of Yale College, was confided the task of revising the nomenclature appropriated to the divers branches of natural science, to Capt. Craighill, of West Point, that of examining critically the glossary of military terms, to Dr. Mason and Mr. Dwight the duty of scanning those expressions dear to artists and the Muses, while the Hon. J. C. Perkins was specially retained to watch over all the technicalities of law and carefully to exclude therefrom all flaws and informalities.

Thus have the definitions been re-written, the etymology enlarged, technical terms elucidated, synonymes (from the edition of 1859) re-arranged and interspersed throughout the text, the difference of pronunciation indicated in over 1300 words, secondary accents introduced, and numerous tables and pictorial illustrations added. The wood-cuts are both inserted in the body of the dictionary and classified in an appendix so as to exhibit at a glance all the different members of connected series.

An entirely new feature in this edition is the addition of *An Explanatory and Pronouncing Vocabulary of names of noted fictitious persons, places &c.*, by Mr. Wheeler—a complete work of reference in itself occupying over fifty pages and supplying a want often felt by the general reader. All the mythical personages of modern fictitious literature are here assembled and marshalled in alphabetical order.

If anything could have operated as a serious drawback against Webster's Dictionary and prevented so valuable a work obtaining the first place in popular estimation in England and British America, it has undoubtedly been its exceptional orthography, its superior excellence in other respects being almost unquestioned. This impediment has been effectually removed in the present edition by subjoining the old method of spelling in almost every instance in which Dr. Webster had departed from the established usage. No one therefore should now be without a copy of this, undoubtedly the most perfect dictionary of the English language extant; and to teachers especially we recommend it as an indispensable auxiliary.

Backwoodsman.—The Crown and the Confederation. Three letters to the Hon. J. A. McDonald; By a Backwoodsman.—36 p. Lovell, Montreal, 1864.

Hamilton.—Union of the colonies of British North America; By P. S. Hamilton, of Nova Scotia.—103 p. Lovell, Montreal, 1864.

McGee.—Notes on Federal Government, past and present; By the Hon. T. D. McGee. Dawson, Montreal, 1864.—pp. 76.

This and the two preceding pamphlets belong to that class of literary productions which attends upon every important change in the political constitution of a free people. In the last, Mr McGee imparts to the public the result of his historical researches into the subject of confederation. From the Achaian League to the Southern Confederacy no precedent has escaped his observation. We have a review of the Italian Republics of the middle ages, the Swiss Confederation, the Dutch Republic, the Germanic Confederation, the American Federal Union and the Confederation of New-Zealand. The author draws his conclusions in a moderate and guarded tone.

Brié & Grimaud.—*Les poètes lauréats de l'Académie française. Recueil des poèmes couronnés depuis* 1800 *avec une introduction* (1671-1800) *et des notices biographiques et littéraires*, vol. 2nd., 1830-1864; 18mo. Paris; 1864: 416 p. Bray.

Le Roy.—*Etude historique et critique sur l'enseignement élémentaire de la grammaire latine, par Alphonse Le Roy, professeur à l'Université de Liège et à l'école normale des humanités;* 8vo. Paris; 1864. 262 p. Daveluy.

This learned treatise first appeared in the Brussels *Revue de l'Instruction Publique.* It is eminently worthy of the attention of grammarians, and we heartily recommend it to teachers who may be in a

position to derive pleasure or profit from the perusal of one of the best works of the sort in the French language.

Langevin.—*Cours de pédagogie ou principes d'éducation par Jean Langevin, prêtre, principal de l'école normale Laval.* Large 12mo, xv-408 p. Darveau, Quebec. Price Bound, $1.

The author has already published in pamphlet form a series of *Answers* to the questions forming part of the Teachers' Examination Papers on Agriculture and the Art of Teaching. In that little work, which obtained the approval of the Council of Public Instruction, the candidate's previous acquaintance with these branches was necessarily pre-supposed; its purpose, therefore, was merely to assist the memory, not to impart knowledge of a technical nature to the learner. The present treatise, the most important work of the kind which has issued from the Canadian press, is designed to accomplish this special purpose, and to supply a want long felt in the particular department of our public school system to which it is devoted. The matter is arrange under six distinct heads, viz: The Teacher, the Normal School, Education, Teaching, School Management, and the Teacher's Conduct; and an appendix is added in which will be found a concise history of the rise and progress of Education in Lower Canada.

A Few Remarks on the Meeting held at Montreal for the Formation of an Association for the promotion and protection of the Educational interest of Protestants in Lower Canada; 36 p. Senecal, Montreal: 1864.

Observations *sur l'assemblée tenue à Montréal pour former une Association dans le but de protéger les intérêts des protestants dans l'instruction publique;* 36 p. Senécal, Montreal; 1864.

These pamphlets which are reprinted from the *Journal of Education* and *Le Journal de l'Instruction Publique,* may be had at all the Booksellers. Price 12 cts.

MONTHLY SUMMARY.

EDUCATIONAL INTELLIGENCE.

— The Minister of Public Instruction, says the *Bulletin,* having invited *l'Academie des Inscription et Belles-Lettres* to express an opinion as to the expediency of adopting the modern pronunciation in teaching the Greek language, that learned body has appointed a committee to examine the question. This committee is composed of the following members: Messrs. Brunet, de Presle, Dehêque and Alexander Rossignol. M. de Saulcy, President of the Board, M. Egger, Vice-President, and M. Gignault, Secretary, will also take part in the deliberations.

LITERARY INTELLIGENCE.

— At the last meeting of the Literary Club on Monday evening, a paper was read by the Rev. Canon Leach, one of the Fellows of the Club, on the "Moral Influence of the Greek Drama." The Rev. and learned gentleman's paper was characterized by that classic purity of taste, that high culture, and scholarly appreciation of his subject, which have given him a foremost place among the literary men of Canada. Notwithstanding the inclemency of the weather, there was an unusually numerous attendance of menbers, who listened with rapt attention to the paper. As illustrations of his appreciation of the works of the great dramatists, Dr. Leach introduced several translations—some of them in verse, and marked by a high order of poetic ability. A vote of thanks, proposed by the Chairman, William Workman, Esq., was passed, amid hearty applause, at the close. This paper with others read, will, we suppose, be published among the transactions of the Club.

The Club itself is progressing most satisfactorily. Its members continue steadily to increase. To its Library, have recently been added the journals of the Parliament of Lower Canada from its beginning to its end—a very precious work of reference to the historical student—and thanks to Mr. McGee's generosity the Library walls are adorned with statuettes of the four great Italian poets. Altogether there is hope for Montreal that a good library of reference will be found here and a place of social resort establshed where our scholars and *litterateurs* may meet and establish an exchange of ideas, and spur each other to a deeper and more productive culture of our hitherto too barren literary soil.—*Montreal Gazette.*

NECROLOGICAL INTELLIGENCE.

— Chief Justice Taney died in Washington on Wesnesday night last, at the advanced age of 86. He was born in Maryland, where his ancestors, an old English Roman Catholic family, had settled in the beginning of the 17th century. Admitted to the bar in 1799, he soon afterwards took an active part in public life. Delegate to the General Assembly in 1800, State senator in 1816, in 1831 he was appointed by President Jackson, Attorney General of the United States. Nominated by the President to the Secretaryship of the Treasury, he was opposed by the Senate, which was politically against him. In 1835 the same Senate opposed his appointment as an associate judge of the Supreme Court. On the death of Chief Justice Marshall, however, a senate of a different political complexion confirmed his nomination to the Chief-Justiceship. This was in January 1837, since which time until his death the nominee of General Jackson retained the elevated position to which he was then appointed. His career though an active one throughout, has been principally noted for his decision in the "Dred Scott" case. In that case he held that for more than a century previous to the adoption of the declaration of independence, negroes, whether slaves or free, had been regarded "as beings of an inferior order, and altogether unfit to associate with the white race either in social or political relations; and so inferior that they had no rights which the white man was bound to respect;" that consequently such persons were not included among the "people" in the general words of that instrument, and could not in any respect be considered as citizens; that the inhibition of slavery in the territories of the United States lying north of the line of 36° 30', known as the Missouri Compromise, was unconstitutional; and that Dred Scott, a negro slave, who was removed by his master from Missouri to Illinois, lost whatever freedom he might have thus acquired by being subsequently removed into the territory of Wisconsin, and by his return to the State of Missouri. Judge Taney had, for many years, been in a feeble state of health, though at no time unable to discharge his duties. He was, if we remember aright, the third Chief Justice of the United States, Judge Marshall being his immediate predecessor. Mr S. P. Chase, late Secretary to the Treasury of the United States, is Mr. Taney's successor.—*Journal of Education, U. C.*

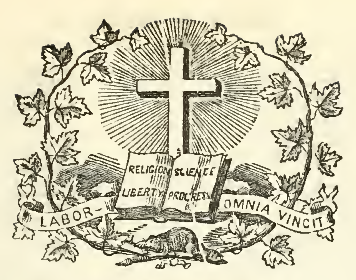
—It is with regret that we are called upon to record the death of the Hon. Joseph E. Turcotte which occurred suddenly at Three Rivers on the 20th ultimo.

Mr. Turcotte was born at Gentilly and educated at the College of Nicolet. He had prepared himself for the Church, but soon abandonded theology for law. In his youth, he wrote and published several poetical essays which may be found in Mr. Huston's *Repertoire National,* except however *Le College de St. Anne*—one of the most admired productions of his pen. Mr. Turcotte took an active part, we understand, in the editing *Le Liberal;* and, of all the orators of the small revolutionary phalanx of Quebec in 1837, he was the most vehement. After the union of the Canadas, he successfully contested the county of St Maurice with Col. Gugy. Subsequently, Lord Metcalf made him Solicitor General although he did not at that time hold a seat in the House; but this office he resigned almost immediately, having lost his election. He did not re-enter Parliament until 1851, but had, ever since, taken a very active part in the politics of the country. He was Speaker of the House of Assembly during the last Parliament and Mayor of Three Rivers at the time of the Prince of Wales' visit. To his activity and enterprising spirit the town of Three Rivers owes much of its present prosperity, the Radnor Forges, Arthabaska railway and proposed railway to the Piles being among the many undertakings he had originated or promoted. In Parliament, Mr. Turcotte had, at different times, represented the counties of St. Maurice, Maskinongé and Champlain and the town of Three Rivers. Besides the services rendered in the trusts previously alluded to, he had served the public in many capacities, having been Translator of Laws, Secretary to the first Seignorial Commission, Judge of Sessions at Three Rivers, and member of the second Seignorial Commission. He died at the age of 56 years and leaves a widow and eight children.

—The Hon. Edward Everett died of apoplexy at his residence in Boston on the 15th January last. His age was about 71 years. A profound and universal feeling of sadness at the announcement of his demise pervaded all classes of our citizens. The nation loses in Edward Everett not merely a talented citizen, but one distinguished for patriotism, private virtues and liberal views on all that effects the welfare of man. Mr Everett has been successively a preacher of the Gospel, professor of a College, a member of Congress, a Governor of Massachusetts, Minister of England, President of Harvard University, Secretary of State and Senator from Masachusetts; each and all of these several positions he filled with credit to himself and constituents It is expected that high national honors will be paid to his memory.—*Scientific American.*

— Among the remarkable men who died during the year just ended, two, on whom we had intended to bestow a passing notice, had escape our pen. We refer to the celebrated Irish agitator and orator, Smith O'Brien, and to the learned Professor Silliman. The latter, who died at the advanced age of 85 years, was the founder of the *American Journal of Science,* popularly known as *Silliman's Journal* and considered the best scientific periodical on the continent. It was first published in 1818. The account which Prof. Silliman gave of his voyage from Hartford to Quebec in 1819, is one of the most interesting narratives of the kind which we have met with, and contrasts singularly with the arrogant tone often assumed by men of less note when describing their experiences in a colony.

Eusèbe Senécal, *Caloric Printing Presses,* 4, *St. Vincent Street, Montréal.*



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LITERATURE.

POETRY.

(Written for the *Journal of Education.*)

HARVESTS.

By Mrs. Leprohon.

Other harvests there are than those that lie
Glowing and ripe neath an autumn sky,
Awaiting the sickle keen,
Harvests more precious than golden grain,
Waving o'er hill-side, valley or plain,—
Than fruits mid their leafy screen.

Not alone for the preacher, man of God,
Do those harvests vast enrich the sod,
For all may the sickle wield,
The first in proud ambition's race,
The last in talent, power or place
Will all find work in that field.

Man toiling, lab'ring with fevered strain,
High office or golden prize to gain,
Rest both weary heart and head,
And think when thou'lt shudder in Death's cold clasp
How earthly things will elude thy grasp;—
At that harvest work instead.

Lady, with queenly form and brow,
Gems decking thy neck and arms of snow,
Who need only smile to win,
Mid thy guests, perchance, the gay, the grave,
Is one whom a warning word might save
From folly, sorrow or sin.

Let that word be said, thine eyes so bright
Will glow with holier, softer light
For the good that thou hast done,
And a time will come when thou wilt reap
From that simple act, more pleasure deep
Than from flatt'ring conquests won.

Young girl in thy bright youth's blushing dawn,
Graceful and joyous as sportive fawn,
There is work for thee to do,
And higher aims than to flirt and smile
And practise each gay, coquettish wile,
Admiring glances to woo.

Ah! the world is full of grief and care,
Sad, breaking hearts are every where,
And thou can'st give relief,
Alms to the needy—soft word of hope
That a brighter view may chance to ope
To mourners bowed by grief.

That gauzy tissue, yon bud or flower
That tempt thee at the present hour,
To be worn, then cast aside,
Bethink thee, their price might comfort bring,
Food or fuel to the famishing
And help to the sorely tried.

Such harvest fruits are most precious and rare,
Worthy all toil and patient care,
Suff'ring and inward strife,
Not earthly gains that will pass away
Like morning mist or bright sunset ray,
But eternal glorious life.

OUT IN THE AIR.

"I have read somewhere of a custom in the Highlands, which, in connection with the principle it involves, is exceedingly beautiful. It is believed that, to the ear of the dying, which just before death always becomes exquisitely acute, the perfect harmony of the voices of nature is so ravishing as to make him forget his sufferings and die like one in a pleasent trance. And so, when the last moment approaches, they take him from within and bear him out to the open sky."

N. P. Willis.

Not here! not here, in the hot, close room,
Where the tainted air is heavy and thick!
Not here, in the sad and solemn gloom
That hangs round the bed of the deadly sick!
Not here, with the sobs that pierce my heart,
With the well loved mourners standing by.
Not here, mid such sights and sounds, I part—
Oh, carry me out, dear friend, till I die.

For out in the light of the pleasent sun
The breezes sing as they flutter by;
And the rivulets, murmuring as they run,
Join in the happy melody;
And a thousand birds in the budding spray
Chirrup, the whispering leaves among,
And the light that blesses and gladdens the day
Comes down, though *ye* hear it not, with a song.

The birch tree rustles, the alder sings,
And far in the chattering woods the oak,
Wak'ning the noisy echoes rings
A bass to the shrill of the woodman's stroke;
And there, where the village school is out,
From the happy urchins deep in their play
Comes many a merry laugh and shout
To cheer my heart as I pass away.

A little while longer, and I shall have done
With all on this beautiful, God-given earth,
And yet, though my sands be nearly run,
My heart answers still to innocent mirth;
And nature's voice is as sweet to me,
Waiting here for the call from above,
As when she talked to me secretly
In youth's bright hours of joy and love.

But now some marvellous power is near
That quickens my ear, though my eyes grow dim,
And I hear, though ye cannot, distinct and clear,
The voice of a sweet and glorious hymn.
Was it the violet whispered to me,
Or the golden buttercup bending down,
Of the praise that rings through eternity
And the Blest Ones' peace, and their golden crown?

Where am I? Lo! all around me swells,
As it were, an immortal melody,
Forests and flowers, streams and bells,
Blend in unspeakable harmony.
Oh God! this is Heavenly bliss, not pain,
And the angels too! what was it they said?

Carry him back to the room again,
He knows what the angels say now—He is dead.

J. J. P.
Montreal Gazette.

THE EARLY RAIN.

BY MISS E. N. CAMPBELL.

The rain! the rain! the pleasant rain,
So charmingly it pattering falls,
And courses down my window-pane,
In soft, rain-channels to the walls.
The thirsty earth drinks eager up,
Each cool, baptismal, silver drop,
That falls from Nature's high cloud-cup,
On shrub, and branch, and tall tree-top.
The leaves their tiny palms expand,
To wash away the dust of weeks,
And seem to laugh—a flut'ring band!
As each its glad *tree-thanks* bespeaks.
Mokelumne runs wild with joy,
And dashes on with deepened sound,
And echo soft like maiden cry,
Repeats the anthem tumbling round,
And drooping mosses graceful swing;
Tree nods to tree, as if to say,
In undertone of whispering,
"We're thankful for this rainy day."
I cannot go to meet my friends,
Nor friends can come to meet here;
But thankful for what Heaven sends,
Accept my lot with happy cheer.
And I am idle,—and have brought
My books and papers, pictures, all,
And lost in dim, ideal thought,
List to the rain-drops as they fall,
With lulling, soothing, murmuring note,
Wafting my spirit far away,
In visionary realms to float,
In bright, elysian lands to stray.
Each sense is hushed, save sight and sound,
I see the drops,—the sky,—the trees,—
I hear the patter, patter round,
And wailing of the autumn breeze.
I glance my books and papers o'er,
Then upward to the leaden sky,
I listen to the rain once more,
And hear its notes go floating by.
Its harmony so richly swells,
With trillings of strange "time-notes" rare,
Like tinkling of sweet silver bells,
And symphonies born of the air.
And I have listened to their fall,
In that strange dreaminess,
When happy thoughts o'ersweep the soul,
And simple being is a sense of bliss.

California Teacher.

SCIENCE.

Leaves from Gosse's Romance of Natural History.

(*Continued.*)

MULTUM E PARVO.

Other navigators have noticed broad expanses of the ocean tinged with colour, well defined; as the red water seen by M. Lesson off Lima, and that which in the vicinity of California has been called the "Vermillion Sea;" to which Sir E Tennent has recently added the sea around Ceylon, which is of a similar hue, and which he has ascertained to be owing to the presence of infusorial animalcules.

Off the coast of Brazil, Kotzebue observed on the surface of the sea, a dark brown streak, about twelve feet wide, and extending in length as far as the eye could reach. It was found to consist of an innumerable multitude of minute crabs, and the seeds [or air-vessels?] of a submarine alga.

In certain parts of the Arctic Ocean the water, instead of being colourless and transparent, is opaque, and of a deep green hue. Scoresby found that this was owing to the presence of excessively numerous microscopic *Medusæ.* He computes that within the compass of two square miles, supposing these creatures to extend to the depth of two hundred and fifty fathoms, (which, however, is scarcely probable,) there would be congregated together a number which eighty thousand persons, counting incessantly from the creation till now, would not have enumerated, though they worked at the rate of a million a-week! yet it is calculated that the area occupied by this "green water" in the Greenland Sea is not less than 20,000 square miles. What a union of the small and the great is here!

It is little suspected by many how largely small seed-eating animals, and especially birds, contribute to the clothing of the earth with its varied vegetable riches. Peculiar provision is made in many cases for the dissemination of seeds, in their own structure, of which the pappus of the dandelion and the adhesive hooks of the burdock are examples; but this is largely effected also in the stomachs of birds, the seed being often discharged not only uninjured, but made more ready to germinate by the heat and maceration to which it has been subjected. "From trivial causes spring mighty effects:" and the motto has been illustrated by a close observer from this same subject. "Doubtless many of our most richly wooded landscapes owe much of their timber to the agency of quadrupeds and birds. Linnets, goldfinches, thrushes, goldcrests, &c., feed on the seeds of elms, firs, and ashes, and carry them away to hedge-rows, where, fostered and protected by bush and bramble, they spring up and become luxuriant trees. Many noble oaks have been planted by the squirrel, who unconsciously yields no inconsiderable boon to the domain he infests.

Towards autumn this provident little animal mounts the branches of oak-trees, strips off the acorns and buries them in the earth, as a supply of food against the severities of winter. He is most probably not gifted with a memory of sufficient retention to enable him to find every one he secretes, which are thus left in the ground, and springing up the following year, finally grow into magnificent trees. Pheasants devour numbers of acorns in the autumn, some of which having passed through the stomach, probably germinate. The nuthatch in an indirect manner also frequently becomes a planter. Having twisted off their boughs a cluster of beechnuts, this curious bird resorts to some favourite tree, whose bole is uneven, and endeavours, by a series of manœuvres, to peg it into one of the crevices of the bark. During the operation it oftentimes fall to the ground, and is caused to germinate by the moisture of winter. Many small beeches are found growing near the haunts of the nuthatch, which have evidently been planted in the manner described."

Not less important, perhaps, are the results of the destructive than those of the constructive propensities and powers of minute creatures. Of the charming *Introduction to Entomology*, by Messrs Kirby and Spence, no less than five entire epistles are occupied with the injuries which we sustain from insects, while two are devoted to the benefits they yield us. The former is almost an appalling array; the injuries done to us in our field-crops, in our gardens, in our orchards, in our woods and forests, not to mention those which attack our living stock or our persons, by these most minute of creatures, are indeed well calculated to impress on us the truth of that Oriental proverb, which tells us that the smallest enemy is not to be despised.

The locust has been celebrated in all ages as one of the scourges of God; and the Holy Scriptures bear testimony how often in ancient times, and with what effect, it was let loose upon the guilty nations. To outward appearance it is a mere grasshopper, in nowise more formidable than one of those crinking merry-voiced denizens of our summer-fields that children chase and capture; yet with what terror is it beheld by the inhabitants of the East! The speech which Mohammed attributed to a locust graphically represents the popular estimate of its power:—"We are the army of the great God; we produce ninety-nine eggs; if the hundred were complete we should consume the whole earth and all that is in it."

It is only a short time since the public papers were occupied with articles expressing the most gloomy fears for the noble oak and pine forests of Germany. It was stated that millions of fine trees had already fallen under the insidious attacks of a beetle, a species of extreme minuteness, which lays its eggs in the bark, whence the larvæ penetrate between the bark and the wood, and destroy the vital connexion between these parts, interrupting the course of the descending sap, and inducing rapid decay and speedy death.

In the north of France, the public promenades are almost everywhere shaded by avenues of noble elms. In very many cases these trees are fast disappearing before the assaults of a similar foe. And the grand old elms of our own metropolitan parks and gardens are becoming so thinned, that great alarm has been felt, and the resources of science employed for the checking of the mischief. Fifty thousand trees, chiefly oaks, have also been destroyed in the Bois de Vincennes, near Paris. In all these cases the minute but mighty agent has been some species or other of the genus *Scolytus*.

Fortunately in this clime we know only by report the consumptive energy of the termites, or white ants; "*calamitas Indiarum*." Wood, timber of all kinds, with one or two exceptions, is the object of their attacks; and so unrelenting is their perseverance, so incredible are their numbers, that all the wood-work of a house disappears before them in the course of a night or two; though individually they are about the size of the common red ant of our woods. They have an aversion to the light, and invariably work under cover: hence, in attacking a tree, a post, a rafter, or a table, they eat out the interior, leaving the thinnest possible layer of the outer wood remaining. It frequently happens that, after their depradations have been committed, no indication of the work appears to the eye, but the least touch suffices to bring down the apparently solid structure, like a house of cards, amidst a cloud of blinding dust. If, however, as in the case of the supporting posts of a house, any incumbent weight has to be sustained, they have the instinct to guard against the crash which would involve themselves in ruin, by gradually filling up the hollowed posts with a sort of mortar, leaving only a slender way for their own travel; thus the posts are changed from wood to stone, and retain their solidity.

Forbes in his *Oriental Memoirs* has recorded a curious, but by no means unusual example of the ravages of the termites. Having had occasion to shut up an apartment, he observed, on returning after a few weeks, a number of the well-known covered ways leading across the room to certain engravings hung in frames. The glasses appeared to be uncommonly dull, and the frames covered with dust. "On attempting," says he, "to wipe it off, I was astonished to find the glasses fixed to the wall, not suspended in frames as I left them, but completely surrounded by an incrustation cemented by the white ants, who had actually eaten up the deal frames and backboards, and the greater part of the paper, and left the glasses upheld by the incrustation or covered way, which they had formed during their depredations."

Smeathman tells of a pipe of old Madeira wine having been tapped and entirely lost by a band of these insects, who had taken a fancy to the oak staves of the cask. And Sir E. Tennant appears to have fared no better; for he complains that, in Ceylon, he had a case of wine filled, in the course of two days, with almost solid clay, and only discovered the presence of the white ants by the bursting of the corks.

They find their way into bureaux and cabinets, and grreedily devour all papers and parchments therein, and "a shelf of books will be tunnelled into a gallery, if it happen to be in their line of march." Hence, as Humboldt observes, throughout the equinoctial regions of America,—and the same is true in similar climates of the Old World, indeed, in all, where very special precautions are not taken against it,—it is infinitely rare to find any records much more than half a century old.

But though the exercise of their instinct brings these little insects into collision with man, and so far they act as his enemies, abundantly making up in pertinacity and consociation what they lack in individual force,—we shall greatly misunderstand their mission if we look at it only in this aspect. As an example of mean agents performing great deeds, we must see them far from the haunts of man, engaged as the scavengers of the forest-wilds of the tropics; the removers of fallen trees, of huge giants of the woods, commissioned to get rid of those enormous bulks of timber, which, having stood in stately grandeur and rich life for a thousand years, have at length yielded to death. Not long does the vast mass lie cumbering the soil beneath: the termites attack it, enter its substance from the ground, and in the course of a few weeks succeed in so emptying it, as to leave it a mere deceptive shell, on which if you step, to use the comparison of Smeathman, "you might as well tread upon a cloud."

We presume that, in the following description of a scene in Brazil, we may understand the insects of which we are now speaking, though the traveller calls them "ants:"—

"A number of tall, prostrate trees were lying about, upon which large columns of ants of all kinds moved busily to and fro. In penetrating into the depths of the primeval forest, one sees evidence at every step that these minute creatures are the destroyers of the colossal trees, whose strength braves all the attacks of storm and wind. A striking instance is this of how small are often the means which the Creator employs to produce the mightiest results; for what greater disproportion can be imagined than between an ant and one of these giants of the forest? No sooner is a tree attacked by them than it is doomed; its size and strength are of no avail; and frequently these little insects will destroy it in such a manner that the bark alone remains, and all the woody fibres crumble away, until the tall tree falls at length to the ground with a tremendous crash, a prey to the united and persevering attacks of millions and millions of the ants. Besides these proofs of the destructive power of these insects, the forests along the Estrada exhibit evidence of their skill in the pyramidical ant-hills, similar to those we had seen on the coast of the province of Rio de Janeiro. We also observed large trunks of trees pierced with deep holes, having the appearance of filigree on a grand scale. This, too, was probably the work of these destructive insects."

In Africa, there are flies which are the actual lords of certain extensive districts, ruling with so absolute a sway, that not only man and his cattle are fain to submit to them, but even the most gigantic animals, the elephants and rhinoceroses, cannot stand before them. There is the *zimb* of Abyssinia, the very sound of whose dreaded hum sends the herds from their pastures, and makes them run wildly about, till they drop with fatigue, fright, and hunger. There is no resource for the pastoral inhabitants but instantly to vacate the country, and retire with their herds to their nearest sands, where they will not be molested. This they would do, though they knew that hostile bands of robbers were waylaying them. Such is the terror of a fly.

Quite as formidable in the southern portion of the same continent is the dreaded *tsetse*, like the *zimb* one of the *Talbanidæ*, though a different species. This insect, which is scarcely larger than our house-fly, reigns over certain districts, attacking the domestic animals. Its bite is certain death to the ox, horse, and dog; yet, strange to say, it produces no serious inconvenience to the human body, nor apparently to the wild game of the country — the buffaloes, giraffes, antelopes, and zebras, which roam by millions over the same plains.

The effect on the smitten beast is not immediate, nor does the buzz produce the terror which that of the zimb does. It is not till after several days that the poison begins to manifest its effect: then the

eyes and nose discharge freely, the animal swells, and becomes gradually emaciated, till at length violent purging supervenes, and the animal perishes, the whole blood and flesh being unnaturally altered in condition.

(*To be continued.*)

EDUCATION

An Essay on Common School Education.

BY MISS MARGARET ROBERTSON.

(*Continued.*)

What should be taught in our Common Schools, and what method of teaching should be pursued, in order that they may most effectually attain the object at which they aim?

While it must be insisted upon, that an enlarged knowledge of many subjects is absolutely necessary to our idea of a well qualified teacher, it by no means follows, that many subjects should enter into the course of study to be pursued in our Common Schools. The youth of the greater number of the pupils, the early age at which they generally leave school, and the course which lies before them in life unite to render this impossible and undesirable.

Reading, writing, spelling, the elements of arithmetic and geography should, with scripture history, and the history of our own and the mother country, form the chief matter of instruction. With regard to grammar opinions may vary. No doubt the experience and observation of the greater number of teachers go to prove, that beyond the mere Orthography, it cannot be taught to very young children with pleasure and success. Definitions may be learned by heart, a certain facility in distinguishing the various part of speech, and their relation to each other, may be acquired, but any clear and appreciative comprehension of a full and elaborate system of analysis, is quite beyond the powers of children generally. Still a limited acquaintance with the principles of our language is better than none, and a knowledge of the text of some respectable grammarian may be of great use to those, who without intending to take a full classical course, yet have the opportunity of continuing in higher institutions of learning, studies of which the course pursued in our Common Schools, ought to be the foundation. It would therefore seem right that the elements of English grammar should be among the subjects taught in our Common Schools.

It does not for various reasons seem wise to include in the course of study more than these branches. As has been before intimated the early age at which the greater number of pupils leave these schools, renders an extended course impossible. In most cases, the higher branches of study could only be pursued at the expense of those which in order and importance come first. No acquirements *beyond* the simple elements of these branches, can make up for the neglect of them, or for a *superficial* knowledge of them. A thorough acquaintance with them, is the only stable foundation for education, whether it is to be pursued in our higher institutions of learning, under the guidance of skilful teachers or amid the influences of a life of business or labor.

Let it not be supposed, that the course of study being confined to these elementary branches, the teachers will find no occasion to avail themselves of their superior attainments in their intercourse with their pupils. The more perfectly that a teacher is acquainted with a subject in all its bearings, the better qualified he must be to teach the simple elements. By drawing upon his own resources, now for an argument, now for an illustration, he may throw around lessons, in themselves dry and uninteresting, a charm which shall assist the memory and quicken the other faculties of his pupils.

With regard to many subjets that do not enter into the course of study, he may present them to his pupils in the only way in which they can be of real value to them. While nothing can be less interesting to children generally, than the elements of science, encumbered, as even the simplest text book must be, with technical terms, a skilful teacher may so present many scientific facts, as alike to interest and instruct. The air of vagueness and mystery which the necessary use of unfamiliar terms throws around the description of natural phenomena, a few clear, simple words can oftentimes dispel, and a child's eyes may be thus opened to see ever unfolding wonders in the world around him. In this way, not only may much valuable truth be imparted, but a taste for natural science may be cultivated, a spirit of investigation encouraged.

The same is true with regard to other departments of knowledge. By clear, simple, judicious oral instruction, from time to time, a teacher may do more to excite in his young pupils, a love for the study of history than could possibly be done by giving a stated lesson of so many facts, and so many dates to be learned and repeated daily. An interest in general literature—though these may seem large words to use in connection with the tastes of the children of a Common School—a love for reading, and the right kind of reading, may be thus awakened, and a higher mental and moral tone encouraged.

In another way the enlarged knowledge of the teacher may be made a means of advancement to his pupils. There is often an inclination on the part of young people, to consider their attainments satisfactory as a *result*, rather than as a means toward further attainments. This mistake a capable teacher may correct, by giving them, now and then, a glimpse into the vast domain of science, over whose boundaries, even the most learned have not advanced very far. This may be done in a manner, which, while it may rebuke undue self-satisfaction, shall not discourage the learner at the thought of advancing.

While a teacher keeps in mind, that his duty is not merely to impart knowledge to his pupils, but so to impart it, that they may receive it with pleasure, and make it their very own; while he realizes that in doing his uttermost for them, he is only laying the foundation of education, that is to be completed as the years pass on, that he is only—so to speak—putting them in the way of educating themselves, he will not feel, that he need not avail himself of any acquirements beyond the lessons which may form the daily routine, but, on the contrary, that he must use every available means to enlarge his knowledge, to extend and deepen his experience, to keep his sympathies and his conscience awake to the importance of the work in which he is engaged.

With regard to text books—uniformity is desirable and will become possible, as soon as we shall have an entire series of Canadian school-books, as good and as cheap, as those which can now be procured from England and the United States. In a country where so many nationalities are represented, it is not surprising that a great variety of school books should exist. It is an evil that must be patiently borne with, because it cannot speedily be set right. Time is needed, as well as wisdom and enterprise to correct it. Though a circumstance to be regretted, it is by no means so deplorable a matter, but that competent and faithful teachers may do much to obviate the evils which spring from it. But while teachers are not to discourage themselves, or excuse the slow progress of their pupils, by dwelling upon the variety and imperfection of the books which they find in their schools, they whose duty it is to consider the matter and act in it, must be aware, that the sooner that an improved series of school books can be arranged for our Common Schools, and generally introduced into them, the sooner shall these schools be made available in the highest degree for the attainment of the object at which they aim.

As to the *method* of teaching to be adopted in these schools, a thorough discussion of the subject might very well occupy many more pages than can be devoted to it here. Time and space will only permit a brief allusion to certain principles the recognition and practice of which, are absolutely necessary to the successful working of any method of teaching.

Order and regularity in the recurrence of recitations, should be strictly adhered to. If a class are in doubt as to the time they are to be called, or if frequent omissions leave room for a doubt whether they *may* be called, the chances are very much against a thorough preparation of the lesson on the part of all the members. Regularity is more to be desired than frequency. A lesson regularly recurring twice or thrice a week will be of more value to a class in the course of a term, than a lesson intended to be given every day, but subject to change or omission.

Perfect recitations should uniformly be insisted upon. When the lesson consist of principles enunciated, of rules or definitions, the exact words of the text book should be required, When processes are explained, or facts or illustrations given, the pupil should be encouraged to give the substance of the lesson, in his own language. No lesson should be passed over before it is understood, or until its relation to preceding lessons is made clear to the pupil. Frequent reviews should be insisted on, as greatly assisting the pupils, both in retaining and understanding the lessons.

Distinctness of utterance in recitations should be attented to. Too great rapidity of utterance is a fault, which no degree of correctness in other respects should be permitted to excuse. It is a fault into which young people very naturally fall, and it must be guarded against and corrected at whatever expense of time and trouble. Especially should this be the case, with regard to reading and spelling. Every word in a spelling lesson, clearly and distinctly pronounced by the teacher, should be as clearly and distinctly repeated, at least twice by the pupil, once before, and once after spelling. The matter of a reading lesson ought to be so within the comprehension of the pupils,

that the whole attention may be given to the *manner* of reading. Distinctness of utterance in order and in importance, is the very first quality to be considered. Faults in utterance and pronunciation should be carefully guarded against in all school exercises, and it is in spelling and reading lessons, that the best opportunities occur, for forming good habits in this respect.

In teaching arithmetic, mental operations should be encouraged. Valuable assistants as a teacher may make slates and blackboard, in teaching this branch of study, they must not be too exclusively used. Many pupils acquire great skill and quickness in performing operations with abstract numbers, who fail utterly in applying the simplest principles of arithmetic in practice. If a choice were to be made between mental and written arithmetic, either as a means of discipline to the mind, or for use in business, there could be no hesitation in choosing the former method of teaching it. The methods must be united, in order that arithmetic may be well understood.

It must be acknowledged, that as a general thing very imperfect success attends the teaching of writing in our Common Schools. This arises in no part from the foolish idea that prevails in some quarters, that mere penmanship is a secondary matter in education. A fair, clear handwriting is admired and valued, as it ought to be by parents and children. It is justly felt, that nothing which a child is expected to learn at school, will be of more service in after life, than to write well. Several causes hinder success. The inconvenience of many of our school houses for purposes of writing, and the frequent change of teachers have something to do with it. And teachers will do well to remember, that even with the aid of copperplate copies they cannot teach writing well, unless they themselves write freely and legibly.

Both teacher and pupils may be greatly assisted in this matter, by a judicious use of the blackboard and slates. Letters, words, or sentences carefully written on the board, may be copied by a class, on slates or on paper with great benefit. Children should also be required to copy regularly from the book their daily spelling or reading lesson. This will answer several ends. It will teach them to write and spell, and it will serve to preserve order, by keeping them pleasantly employed, at times when the teacher's attention cannot be given to them.

Children should also be made to write from dictation. This will not only help them as regards the free and pleasant use of the pen, but it will be of great service to them in other repects. It is one thing to write well under a copy, and it is quite another thing to encounter the combined difficulties of composition, spelling, punctuation, and a proper use of capitals, which the writing of a legible and intelligible letter must present to one not accustomed to write. These difficulties the daily copying of lessons, and frequent writing from dictation will do much to remove.

A well prepared lesson well recited can scarcely fail to be an interesting exercise, both to teacher and pupil, and it is in the power of a well informed and skilful teacher to extend its pleasing and profitable influence beyond the occasion. It is at such times, when the minds of the pupils are most awake and active, that his superior attainments may best be made use of for their advantage.

Permit me to illustrate. Suppose the lesson to be an historical one. It is likely that some of the members of the class may have had recourse to a variety of methods to assist the memory in retaining it. Some of these may be of such a nature, as to be valuable merely for the moment. The place on the page—some peculiarity of expression—some arbitrary association of names, dates, or incidents may have been seized upon and made available for the occasion. Beyond the occasion they cannot be made available, and so far as a knowledge of the lesson depends on them, it is lost, unless it can be in some other way retained.

It is for the teacher then to disassociate from the printed pages, the characters and events which formed the subject matter of the lesson. It is for him to give form to mere names, to place them as living characters in a real world, to make visible hidden motives of action, and to point out the relation existing between cause and effect, in such a way, that not merely the pupil's memory, but his imagination, his judgment, his sympathies may be interested. Then, and not till then, will the matter of the lesson be really his own.

Suppose the lesson to be a geographical one.—A child learns with regard to Brazil, that it is a very large country in South America—that its mountains are high, its plans extensive, its river the largest in the world, its forests so dense as to be impenetrable, &c. He may remember these things as they stand in the book, but much interest will be thrown around them by a few simple words, telling of the wonderful variety of animal and vegetable life, with which these mountains and valleys, these rivers and forests teem—the gigantic trees, the treelike vines and ferns, the wondrous flowers and fruits which astonish unaccustomed eyes—the birds of brilliant plumage—the fierce wild beasts—the terrible reptiles which find a home among them. Let him get a glimpse, through his teacher's eyes, of these vast plains, where spring seems to urge on a gigantic vegetation, only for the summer to destroy, let him peep into one of these lovely valleys where it is always spring, or gaze awestruck on the mountain tops where winter ever reigns, how changed will his ideas be! The name of Brazil will no longer suggest to him merely the memory of a dull printed page with a poor little picture illustrating it. He by his teacher's aid has caught a glimpse of a new world, a new manifestation of life which must be his own forever.

To accomplish all this will not require much time, or many words, or great talent on the teacher's part. The tact, patience, and skill necessary for the right performance of his other duties, will, with a knowledge of the subject under discussion, be sufficient for this.

The merits of the method of teaching very young children by means of object lessons, can only be fairly presented by those who have had experience in this manner of teaching, or an opportunity of observing its results. I am not one of these, and therefore I can say nothing as to the desirableness of preparing our teachers for the formal introduction of the system into our schools. But this may be said. A teacher interested in the improvement of his pupils, will find many opportunities to teach them in this way, without the formal announcement of a lesson. Especially may children living in the country, who pass daily, to and from school, through fields and woods, in the midst of pleasant natural objects, be thus benefited. By means of the flowers and fruits which they gather, the trees which they climb, the rocks over which they clamber, the pebbles of the brook, and the birds of the air, they may be taught many pleasant and useful lessons. Their powers of observation may be more happily awakened in this way than in any other. Their eyes may be thus opened to see the wonders of the world of nature around them. They will not only learn to observe, but to classify facts, and reason from them, and the knowledge obtained in this way, will be far more their own, and far more valuable to them, than it could be, if obtained alone from books

There is another branch of education which may not be overlooked in enumerating the subjects proper to enter into the course of study to be pursued in our Common Schools.

What place should be given in these schools to moral and religious teaching?

The circumstances which in our country make the subject of Christian education, one to be approached with a certain delicacy and reserve, afford no sufficient reason for avoiding the subject altogether. For in the answer to this question, lies in some measure—let me say in a great measure—the secret of the future success or failure of these schools, in attaining the object at which they aim.

While there are few who do not acknowledge that an acquaintance with the principles of morality, and the truths of revealed religion, is of infinite importance, there are many who profess to doubt the propriety of permitting direct religious teaching in the schools of a country, where so many religious sects prevail. They acknowledge the importance ef early and constantly instilling into the minds of the young, a knowledge of those principles, which shall influence them toward the love and practice of virtue, but they fail to see that this can only be very imperfectly accomplished, if it is undertaken without reference to the one standard of right, by which these principles are to be tested. This standard is God-given, and cannot with impunity be ignored or set aside.

In a mixed community like ours, the Bible cannot be *formally* included, among the books of daily study in our Common Schools. Apart from other reasons, there may be some force in the objection that the familiar use of God's work, as a school book, may have a tendency to lessen the reverence with which it ought to be regarded.

Any force that there may be in this objection ought not to tell in a matter of such importance. Properly conducted, these daily readings may be made the means of deepening, rather than of lessening, the reverence of children for the Bible. Viewed *merely* as a reading book—a series of lessons by which children may be taught to read with pleasure and success—many of the historical portions of the Old Testament with the Proverbs, and the Evangelists, are unequalled. But a judicious teacher will be careful not to allow the exercise to become a *mere* reading lesson. The pupil must never be permitted to forget, that what is read comes to him with authority—that this is the standard with which all opinions are to be compared—the rule of life—the guide to Heaven.

It is very clear, that by means of the simple truths of the Bible—the histories recorded, the principles illustrated, the doctrines taught in it, a child can best have impressed upon his heart and mind, those truths which are rather vaguely spoken of, as the principles of morality and virtue. Separated from the Christian element, or perhaps I ought rather to say, from the truths revealed in the Bible, what is there left of these principles of morality and virtue, that can be made to commend itself to the heart and mind of a child?

No sense of the unchangeable nature of right and wrong, which is the foundation of all morality, can be awakened in him, apart from the knowledge of God as the lawgiver of the world. No just ideas of our mutual relations, duties, and responsibilities can be conveyed to his mind, while he remains entirely ignorant of his relation to his Maker, or unimpressed with a sense of his responsibility to Him. Through a sense of this responsibility a child can alone be taught his highest relative duties—obedience to parents, to teachers, to the laws of his country—a love of truth, and all that is lovely in character; a hatred of deceit, of selfishness, of meanness in all its forms, can best be taught him, by inculcating the precepts, and exhibiting the life, of the only Perfect Example.

They do not speak wisely, who, while they acknowledge that the principles of morality ought to be impressed on the minds of children, yet declare that direct religious teaching is not to be permitted in our Common Schools. In their minds it is impossible to disassociate the ideas of *religious* teaching and *sectarian* teaching. They fail to see that religious teaching, in its highest sense, is quite apart from—quite beyond the mere iteration of a creed—the setting forth of a sectarian system of belief. Even if moral truth could be more available as a means of instruction, apart from regilious truth, is there not a strange inconsistency in this attempt to ignore the truths of Christianity, in a system of education provided for the benefit of the youth of a professedly Christian community? "Them that honor me, I will honor," is the declaration of Him who, however we may forget or disbelieve it, is in deed and in truth, the giver of success in all undertakings, having for their aim the benefit of the race.

Success in the best and highest sense, will be ensured to our schools, when the teaching shall become Christian teaching. The cultivation of the heart, as well as of the intellect, is necessary to the right forming of character, and it is only through the truths of our holy religion, that the heart can be influenced to reject the evil and choose the good, strenghtened to resist the temptations of the world, endowed with wisdom to escape its snares, and made happy in the practice of virtue.

As to the manner in which religious truth is to be imparted, as to the time and place which religious and moral teaching should occupy in our schools, it may not be desirable, even if it were possible formally to decide. A perfect form of instruction, made obligatory, would by no means ensure the end desired, where an earnest spirit is wanting. It is not *merely* or chiefly by means of formal or prepared lessons, that a pure and happy moral influence is to be exerted in a school. In season and out of season, must the work be done—the guiding and restraining touch given. Here a little, and there a little, must the good seed be sown. It is now the plucking of a weed, now the training of a tendril, and again the shading or sunning of a sickly plant, that will make and keep the garden of the heart, fruitful and fair to see.

And so we come back to the point that has already more than once been touched. The school will be what the teacher makes it. It is well that our School System should in theory, and in its operations as a system, be made as nearly perfect as the circumstances of our country and our age will permit. But after all, its successful working toward the best ends, must depend upon the fitness of individual teachers for their work. *Morally*, even more than *intellectually*, the school will take character from the teacher. If he be one who needs no rules to bind him to the performance of his duties as a christian teacher, if he is enlightened to know, and earnest to impart, if his life shall teach, as well as his lips, then shall success in its highest sense, crown his efforts in his pupils behalf.

Nearly connected with the moral and religious influence which a teacher exerts in his school, and in some measure depending upon it, will be his success in governing his pupils. It may not be true, as has sometimes been asserted, that the most orderly school is the best in all respects, but it is true, that without order, no school can attain to a very high character in any respect. A teacher may be "thoroughly furnished" and have the "gift of teaching" but without the power to command the attention and obedience of his pupils, he cannot expect success in the work of teaching. A child's school life ought to be as valuable to him for its discipline, as for the knowledge he may acquire in it, and the teacher, who, though he may teach well, fails to govern his school, does for his pupils but half a teacher's work.

While the power to govern may, as well as the skill to teach, be in some sense considered a natural gift, it is also a faculty that may be acquired and improved. Conscientiousness, common sense, patience, and a moderate degree of firmness are the qualities necesssry to the proper exercise of authority in a school, and of these it is to be supposed, all to whom the office of teacher is open, are in some degree possessed.

A well governed school does not necessarily imply an open or frequent exercise of authority on the part of a teacher, indeed, it implies the contrary. The aim of a teacher in governing, should be, so to impress his pupils with a respect for authority, that its frequent exercise might not be required. When this is accomplished, the work of government will be comparatively easy. In nine cases out of ten, where the acquirements, and the moral and intellectual qualities of a teacher, are such as to command the respect of his pupils, a conscientious exercise of mingled patience and firmness, in his dealings with them, will bring about this state of things in a school. If children are uniformly treated as reasonable and responsible beings, if right motives of action are constantly held up before them, if they are taught that evil should be avoided because it is evil, and that right should prevail because it is right, and if this is taught by the teacher's life as well as his lips, his influence will be sufficient for their guidance and control. And if to the respect, which fitness for his position will generally command, be added the love which uniform kindness is sure to win, the relation between teacher and pupils cannot fail to be a happy one.

A teacher can govern well, only through the exercise of constant care and watchfulness. Not the surveillance of individuals, which comes, sometimes, to stand to a child instead of a conscience. *This*, undesirable anywhere, is impossible in a day school. But seeing many things, without seeming to see them, he must learn to judge of dispositions and character, from the trifling incidents of the schoolroom and playground, and guide himself by this knowledge in his dealings with his pupils.

A school to be governed well, must be governed by a plan. The rules must be few and simple, and they must also be absolute. Let a few things be uniformly required, let regularity and punctuality in attendance, and perfect silence during school hours be the law—enforced by penalties more or less severe, and the effect on the order of the school, will be far better, than could result from the multiplication of laws, only partially enforced. I do not think it is too much to say, that a teacher should voluntarily deprive himself of the power to excuse the breaking of these laws, whether they be broken wilfully or carelessly. The law that can be set aside, will soon be despised. Of course there is no comparison to be made between the wilful and deliberate breaking of rules, and the same fault committed through carelessness, but in as far as example and disorder in the school are concerned, evil may follow both alike. And inasmuch as disorder in school, springs much more frequently from carelessness than from design, faults of carelessness must be punished as certainly though perhaps not so severely as faults of wilfulness. It is not meant that mitigating circumstances are not at all to be taken into consideration. The executive power is in the hands of the teacher, and very different degrees of personal displeasure, may mark his sense of the different positions in which the culprits have placed themselves. But punishment, varying in degree, must follow each. The law must be honored in one case as well as the other.

With regard to the nature of the penalties, each teacher must be guided by his own judgement, as dispositions and circumstances vary. The abridgement of playtime—an additional task—the withholding or withdrawing of rewards—a mark of demerit, or a public reproof may be sufficient for reformation. If not, severer measures must be taken, for law must be sustained, if order is to be preserved.

It has become the fashion to declare that the days of the ferule and the birch rod are over. When now and then, old people venture to hint, that though the children of the present day may be better taught than they used to be, they are not so well governed, this is generally regarded as a pleasant self deception on their part, which inclines them to make good days of all the days that have passed away. The tendency of the age toward a relaxation of discipline in the family and in the school, is generally considered a matter for congratulation, and Solomon's prescription for the purging of folly from the heart of the child, is in a great measure ignored.

For my part I believe in the rod. Not merely as a last resort, a means to bring about an end, when all gentler measures have failed. It is a legitimate, time-honored, and effectual power in government second to none, and it ought to be an acknowledged power. It may be humiliating to human nature, but it is still a fact, that children generally are more speedily, more effectually, and more permanently convinced by its means, than by any other, and it is a false, and often fatal kindness, that would incline parents to dispense always with its use, in the government of their families.

Of course I shall not be understood as maintaining the rod to be the *sole*, or even the *chief* power in government. Far from it. Rightly used, the rod becomes a rare necessity. Its frequent use implies its abuse and in such a case it may be thrown away, for it is no longer effectual for good, but very effectual for evil.

What is true with regard to family government, is true with regard to the government of the school, with this difference—Children old enough to be sent to school, ought to be too old to require the rod.

If its use should be rare in the family, still more rare should it be in the school. But in the school, as in the family, it should be an openly and respectfully acknowledged power. Children taught obedience at home, will not require severe lessons at school, but when falsehood, disobedience, insubordination, or a frequent wilful or careless violation of rules is persisted in, they err greatly who refuse to sanction the use of the rod.

The surest guarantee for good government in a school, lies in the moral and intellectual fitness of the teacher for his office. There have been cases doubtless, where teachers worthy of respect, have failed to command a ready obedience from their pupils. Such cases may be the consequence of a more than ordinary deficiency in them, of that executive faculty, so valuable to a teacher, but more frequently they arise out of a combination of circumstances over which a teacher has no control. That these cases are exceptional, is proved by the fact, that utter failure in one school, may be followed by marked success in another. The presence or absence of this executive faculty cannot be proved by examination. But the fitness of a candidate in other respects, presupposes an ability to govern a school or at least implies a possession of faculties which by cultivation, may fit him for this necessary part of a teacher's duty.

While the success of the cause of education among us mainly depends upon the moral and intellectual fitness of teachers for their office, all the responsibility of partial failure, by no means rests upon them. Without this moral and intellectual fitness in them, the cause of education cannot advance. With it, it cannot advance rapidly in the face of adverse circumstances, which, not the teachers, but the community in general, and the educated part of the community in particular, have the power to modify or remove.

As has been before intimated, the progress of education in this part of the country is more apparent, from the larger number and the greater efficiency of the higher institutions of learning among us, than from any marked change for the better in the manner of conducting our Common Schools generally. The number of these is enlarging, and in villages and other localities, where the influence of educated persons is, with other favorable circumstances, brought to bear on them, their efficiency is also increasing. But the schools generally are very far from having reached a high standard of excellence in any respect.

The remedy lies to a certain extent, within reach of the people themselves, and by them only can it be applied. It is in the power of the people of every school district greatly to improve the character of their own school. The duty of the commissioners is not done, when a teacher has been chosen and installed in his office. The duty of parents implies more than the mere sending of their children to school, and the paying of their share of the school tax. The authority of a teacher, worthy of the name and office, ought to be sustained by the personal influence of the commissioners of the school, and of the parents and guardians of the children. Confidence in a teacher should be manifested, as well as felt. Every parent should consider it his duty, to visit more or less frequently, the school in which his children pass so many hours daily. These visits, commenced from a sense of duty, would in many cases be continued from pleasure, and the benefit to teacher and pupils could not fail to be evident.

The fact that they have no children in the school, does not release educated men and women from the responsibility they are under to encourage in this way and and in other ways, those who are engaged in carrying on the work of education in our Common Schools. The visits of any officially appointed person, or body of persons however important, must necessarily be infrequent. If the District Inspector can visit each of the schools under his care once, or at the most twice a year, he will do well. If the Commissioners visit each of the schools under their care once during a term, I suppose they think they do well. Now it is certain, that nothing which it is not within the teacher's power to control, can be more beneficial than these visits, conducted as they ought to be. In more ways than can be named they may do good. One school is benefited in one way, another in another. This teacher may be assisted by a word, as to the manner of pursuing certain studies, or of conducting certain recitations, that one may be aided by a timely hint, as to order or government. Of course all the purposes of such official visits, cannot be accomplished by others, but educated persons may do something to make up for their necessary infrequency by giving their personal influence to the work.

These visits need by no means interfere with the regular routine of school duties. They ought not to be made the occasion for exercises, out of the usual order. They should be quite informal and friendly, made with no desire to criticise or correct, but rather as an expresssion of interest in the school, and of encouragement to both teacher and pupils, and then they could not fail to be useful to the school and agreeable to the teacher.

It is possible that now and then, a teacher might be found uneasy, at the thought of receiving visits. This would by no means prove, that the visits might not be needed, or that in time they might not become agreeable. In most cases, where a teacher feels uncomfortable at the prospect of receiving official visitors or others, it arises from a vague dread of criticism, which a little kindly intercourse could not fail to dispel.

The success of teachers and the progres of pupils, are often hindered by the want of trifling conveniences, which a little care on the part of those interested might very easily supply. Pains should be taken to make the schoolhouse comfortable and convenient. It should as much as possible be made a pleasant place—a place around which agreeable association may cluster. The reasons hitherto, in so many cases, considered good, for placing the school-house on some waste piece of land, valueless for any other purpose of use or beauty, ought not to hold beyond the existence of those already built. In new districts, where motives of economy must necessarily be considered first, a small or inconvenient building may for a time be excused, but where the means of the people will at all permit, a consideration for the welfare of their children, ought to be sufficient inducement towards the erection of a far higher class of buildings, than have hitherto been thought good enough for the purpose.

The "boarding round" system as it is called, advisable when the country was new, and convenient still in the more recently settled districts, ought to be as much as possible discountenanced. In districts where the families are numerous, and comparatively "well off" it ought not to be permitted. The evils of the system all may see. The minds of teachers cannot fail to be unsettled, by the weekly or even more frequent change of residence. There can be no such thing as progress in their own studies, or even in general reading. An inexperienced young person may in this way be exposed to influences, far from being conducive to steadiness of character, or may become the subject of remarks, not calculated to sustain his influence for good, among his pupils. In the case of young females, health and comfort are not unfrequently seriously interfered with.

This of course is a matter which can only be remedied by the people of each district for themselves. Those who have the interest of their children much at heart, will do well to consider the advantage to be gained to them by a change in a system, which only circumstances of necessity ought to sanction.

The Principal and Professors of our Colleges, and the teachers of our High Schools may do much to advance the cause of Common School education among us. They may do so indirectly, by giving their influence to the forming and the sustaining of such associations as have for their aim the mutual improvement and encouragement of teachers, and the furtherance of the interests of the cause of education generally. They may do so directly, by interesting themselves personnally in the schools that lie in their immediate neighborhood.

As regards the former of these ways, it need only be said, that this class of teachers have in our district, shown themselves fully aware of the responsibility that rests upon them and fully able to sustain it. With regard to the other method of exerting influence, assertions must of course be made with some reserve, but no reserve need be maintained in dwelling on the amount of good which might be accomplished through this means.

It seems like the mere repeating of what every body acknowledges, to say that the aim of all classes of schools is one,—that the cause of education could no more spare the humble work, done, often painfully and by slow degrees, in wayside schoolhouses, than it could spare the efforts of the men of talent, and learning, who carry on the work in loftier places. And yet, while this is generally acknowledged, and by none with more emphasis, than by these men of talent and learning, the teachers in our Common Schools do not find it alway easy to realize these things as true,—and very difficult indeed do they find it, to believe in its hearty acknowledgment by men, whose labors, in comparison with their own, occupy so large a space in the public eye. Coming rarely into contact with them, seeing them only in their public capacity, as leaders in the great educational movements, agents in the bringing about of results, quite beyond the power of humble individuals like themselves, no wonder that Common School teachers may be inclined to consider themselves without the range of the other's interest and sympathy; no wonder that they hesitate to appropriate to themselves the title of co-workers with them in the same cause.

Yet in the work of teaching, where evident success is sometimes long delayed, and where to the young and inexperienced, the results seem often quite disproportioned to the efforts used, sympathy is invaluable, as a means of strengthening failing courage, of renewing flagging interest, and this self-isolation of Common School teachers, as a class, or as individuals, cannot fail greatly to interfere with their pleasure and their success in their work. From no class of persons could sympathy and interest come so gracefully, as from men of greater power and acquirements, engaged in the same work, from none

could they be so gratefully received. For their work is the same. It may differ vastly as to its details, but its trials, its difficulties, its discouragements, its pleasures, and its rewards are the same, whether met in the wayside schoolhouse, or in lofty College halls. And though Common School teachers may hesitate to claim it as a right, this kindly sympathy—this open acknowledgment of fellowship in labor, is a gift which their more highly endowed brethren honor themselves in bestowing.

As to the manner in which this sympathy is to be expressed, this acknowledgment made, circumstances and individual opinion must decide. The visiting of schools— not formal but friendly—may, where the time can be bestowed, be of great use. All that has been said of the value of visiting in others, will apply in their case with still greater force. A little assistance in the way of advice, the loan, or even the recommending of a book, a frank word, unspoiled by too apparent condescension—a tacit acknowledgment that, as far as their work is concerned, teachers stand on equal ground—all these—mere trifles to the bestower, may yet be very powerful as helps to the more humbly placed and more sparingly endowed receiver.

Nor would this expression of interest be valuable merely as a matter of sympathy and encouragement in the work of teaching. By even a brief and limited intercourse with superior minds, by a kindly word and hint from one whom position and acquirements command his respect, more than by any other means that can be named, may a young teacher be stimulated towards those higher attainments so desirable, indeed so absolutely necessary to full success in his work.

I may be exposing myself to a charge of indiscretion, by even *seeming* to intimate that there is not sufficient interest felt by our Principals and Professors in the welfare and success of their humble fellow-laborers. But there can be no possible impropriety in saying that the expression of this interest might, perhaps, be a little more general and cordial, could they be persuaded to regard the matter from a Common School teacher's point of view. And having said this, enough is said.

With regard to the usefulness of a well sustained "Association of Teacher's" to the cause of education in any district, there cannot be two opinions. "Union is strength," "Two are better than one," "A threefold cord is not easily broken," "In the multitude of counsellors there is safety," are proverbs that apply to this, as to other matters. As a means of mutual benefit, as a means of extending and intensifying the power of teachers to do well their work in the community, they must be valuable. As a means of making teacher's better known to each other, as a means of cultivating that "*esprit de corps*," so valuable in all united labor, the worth of these Associations can hardly be overestimated. By a judicious arrangement of the order of exercises, by a series of lectures, essays, and conversational discussions of questions relating to the cause of education, more highly endowed teachers may make them useful as a means of instruction to the younger and more inexperienced. All teachers, when it is possible, ought to identify themselves with such an Association. All who are interested in the progress of the cause of education, will do well to use their influence for the encouragement of those, upon whom the responsibility of sustaining these Associations chiefly depends—Without the co-operation of teachers, and of educated people generally, these Associations must fail of accomplishing their design. They may be sustained in a certain sense by a few. That is, the meetings of the Association may regularly take place, officers may be annually chosen and the routine of business may be gone through, but only a few will be the better for it. The earnest and enlightned co-operation of all classes in the work of sustaining them, would do much to ensure to the cause of education among us, that measure of success which all good men and true earnestly desire to see.

The questions—"What ought our Common School system to aim at?" and "How can the object aimed at be most effectually attained?" having been briefly and imperfectly answered, the Essayist's work is done. It can be no part of his duty to attempt to impress upon the various classes, who bear the responsibility of succes s or failure, the importance of the trust committed to them. The circumstances which unite to make the subject of Christian education, one of the vital questions of the day, to our section of count:y, and to Canada generally, must be seen and appreciated by all thoughtful minds. Now when the interest with which our daily developing resources is regarded, bids fair to turn the tide of emigration towards us, if the consequent mingling of new elements in society is to work for good and not for evil, as the years pass on, none need be told, that it must be through the moral and intellectual cultu:e of the people. And all must see, that education among us must be emphatically Christian education. Amid the terrible events that are transpiring in the world, the wars and rumors of wars—the changes sudden and st ange which seem to our wavering faith, to be shaking the very foundation of things, who does not feel that we need a sure place on which to rest our feet, the knowledge of a refuge which doubt can never successfully assail?

"Righteousness exalteth a nation, but sin is a reproach to any people," said the wise man, and every page of the world's history since his day reiterates and proves the wise man's words. In this our free country, where the suffrage is all but universal, where the humblest farmer or mechanic may indirectly by his vote influence the conduct of our national affairs, where offices of trust and emolument are in a sense open to all, it is scarcely possible to overestimate the value of Christian education to the young. In the new views that seem to be opening before us as a people in the changes which enlarging resources, and an increasing population must bring, we see tokens of advance or retrogression according as we as a people shall avail ourselves of, or neglect the means of moral and intellectual culture which may be ensured to all. For if we would have "our future copy fair our past," if our breaking dawn is to brighten into the perfect day of national prosperity, if Canada, our land by birth or adoption, is to take a worthy place among the nations, it must be through the enlarged intelligence, the higher morality, the firmer, purer, truer Christian principle and practice of her people.

On the Preparation of Lessons at Home.

BY MR. ARNOLD, PRINCIPAL OF BRITISH CANADIAN SCHOOL, MONTREAL.

Read before the M'Gill Teachers' Association, 10th March 1865.

The subject of the Paper I am about to read is—The Preparation of School work at home.

It might appear to some teachers of little experience, that there is no question about the necessity of children's preparing all their school work at home. They will say it is a time-honored and almost a world-wide custom; and where is the reason for questioning a practice, which has met the approval of teachers of all classes and almost of all ages and nations, where education is attended to. But are there not a great many other old and universal customs which we of modern times are very unwilling to follow? I must acknowledge, however, that it would require a good deal of moral courage in any teacher to try to bring about a change in this respect—a change amounting to almost a revolution in school teaching. What a storm of opposition would it not raise against him from nine-tenths of the parents and guardians of our children? While the accusation of carelessness and indifference would, most probable, be laid against him by many. Notwithstanding, however, all the opposition of parents and others, I am fully under the conviction that it is the teacher's duty to use his utmost exertions to produce this change as soon as possible. I will endeavour to adduce several reasons for making this assertion.

1st. Instead of learning more I think the child will, in the end learn much less, for what he commits to memory, will, in general, be so imperfectly done, that it will take him longer to unlearn it than to acquire twice as much, and that too in a proper manner, under the direction and by the assistance of the teacher.

2nd. The teacher's time will be taken up in hearing the recitation of these imperfect lessons, and in punishing for neglect, which might be spent much more profitably in giving that instruction which would assist the children, not only in committing them to memory, but in understanding and applying them in a practical way.

3rd. Children take a distaste to, and in time, become disgusted with what is daily so difficult; and for the neglect of which, or what is more frequently the case, for the impossibility of its performance, they are so frequently punished.

4th. It is injurious to children's health to study long and difficult tasks that too often only bewilder and confuse their minds.

5th. It is a source of disquiet and annoyance to those parents who are either unable or unwilling to render the necessary assistance to their children, in preparing these tasks.

Many other reasons could be given, but I think the foregoing will suffice to prove that long and difficult lessons should not be given to children, under thirteen or fourteen years of age, to be committed to memory at home, unless they have previously been well explained by the teacher, and every assistance given to enable them, not only to learn such lessons with ease, but to understand, and as far as possible, apply them afterwards.

I said that children would learn less by having long tasks assigned them to be prepared after they leave school for the day. This I think, under ordinary circumstances, can be easily proved. For example: Give a boy or girl a page of Grammar, with an equal quantity of Geography, a portion of Reading and Spelling, with a few examples in Arithmetic, and perhaps some Latin and French, and occasionally, if not frequently, in the case of girls, two or three hours practice on

the Piano. And all these tasks the hard-hearted teacher—for I can apply to him no milder term—expects to be recited or performed the next day without the slightest hesitation or failure.

Now I ask the teacher, who has any sense of feeling, whether it is right or just towards a child to expect from him what is utterly impossible. And I would further ask, Is it not a positive act of cruelty to punish for not learning that which he is unable to accomplish in the time, and with the assistance he is, in the majority of cases, likely to receive?

I do not, however, go so far as to affirm that nothing should be given children to do at home. On the contrary, I believe that if a moderate amount of work were appointed, and that of a kind which would assist in creating a desire for more, instead of beggetting a hatred for all useful knowledge, the teacher's object would be more fully and much more easily attained.

For instance.—It would not be a difficult matter to infuse into the child's mind a taste and a desire for reading entertaining and instructive books, to write a few lines neatly and carefully from some reading lesson or other book, or work out a few exercises in Arithmetic, which had been previously explained. In fact, he might be induced to spend, and that too very willingly, an hour or two in the evening, in a very pleasant and profitable way; and at the same time, gradually acquire a wish to extend his knowledge—a wish which I think, should not be fully satisfied, much less satiated, as is too often the case, when lessons are given, that are long, dry, and to the little child entirely unmeaning.

The greatest care should be taken that the boy be so taught that when he is taken from school, a desire might still remain to know more, with many regrets that his opportunities for so doing have been withdrawn.

The opposite feeling to this, however, is too often exhibited, at the time he is about to become, as he fancies, his own master. His joy is almost unbounded when he learns that he is, at last, to escape from the bondage that has held him from the time of his earliest recollection; and looks upon his books, as the cause of all the pain and misery which he has so long endured. And what does he do with them? Why what we all are naturally inclined to do to that which is the source of our trouble and sorrow—kicks them aside with the determination that such objects of his hatred shall never trouble him again.

It is well known that these are too often his real feelings at the time; and the cause, in ninety nine instances out of a hundred, is overcramming; with the consequences of not swallowing what the stomach loathes and detests from its having so often been surfeited with similar doses.

I think it is the duty of the teacher to present every thing to children in the most attractive and pleasing form, so that a love of learning might be infused into the mind during their school days, and not cease when they are over; but that self-study may then commence, from a love of study for the pleasure it will bring; for it is then, properly speaking, that their real education begins.

When, for example, have our self-taught men commenced their course of self-instruction; and what has been the incentive to this course? They have not usually begun under twelve or fourteen years of age, nor have they set themselves to a task, which requires, particularly at first, much laborious study, perhaps under almost insuperable difficulties, and a great deal of self-denial, because they had been tied down to it, and threatened and punished almost daily for the non-performance of impossibilities from the age of five or six to that of thirteen or fourteen.

No the boy so treated, for so long a period, remains as far as his education is concerned, almost the same for life, as when he left the place which had been the scene of so many of his youthful troubles.

No, it has been, in most instances, those who were denied the opportunities of a school education, and at the age when they began to feel the want of it, that they have been roused to the determination of straining every nerve to become possessed of that which their more favoured companions look upon with so much indifference; and they toil on steadily and perseveringly, not however, from fear of corporal punishment, should daily success not crown their efforts; and be driven to every expedient, by which relief may be sought from such irksome tasks, or escape the punishment which they are sure to receive if they are not performed in a manner that meets the approval of an exacting and arbitrary teacher.

The difficulties which at first present themselves, are overcome one by one, and bye-and-bye, his studies are, like his food, taken with a zest, which others cannot enjoy, simply from the fact of their having been crammed to satiety, and punished with so much severity when at school.

It must not be supposed, however, that I wish to indulge children in laziness and indolence, nor to screen them from deserved punishment; not at all. I would always give them sufficient to keep them from falling into habits of idleness, and even punish for neglect; but I think we should not exact a daily routine of dry, hard tasks to be got by heart, which we ourselves could scarcely master in the time allotted for its accomplishment.

The second reason I gave against this system, was that too much of the teacher's time is taken up in hearing the recitation of imperfect lessons, and punishing the numerous defaulters.

Every teacher of a large school will, I am satisfied, acknowledge the utter impossibility of properly hearing all his classes say the lessons they had learnt, or rather, *not* learnt at home during the previous evening, in the three school hours of the morning. And again—Where is the time and the opportunity for the necessary explanation of these tasks. Not a word can be explained, not a remark made, for fear of interruption, because the child is supposed to repeat it unhesitatingly word for word according to the book; though trembling all the while for fear of the punishment that awaits the slightest failure.

And when the three hours are over, and every one has been heard, what are they the wiser? What advancement have they made even should every word have been repeated correctly? Would not half an hour spent by the teacher in reading over, and explaining these lessons, and questioning the classes for the purpose of getting their own ideas as to their meaning and application, have effected ten times as much, in the way of real progress, as the three hours spent as I have described. Not to speak of the pleasure both to teacher and pupil when knowledge is imparted in this way.

Something might also be said in favour of this system in preference to that which almost universally prevails, if we take into consideration the opportunities the teacher has in adding to his own stock of information; for he cannot very well explain a lesson thoroughly, without acquiring some new ideas himself. Even an occasional remark which he may get from a class of intelligent children, if allowed to express their ideas freely, will at times extend his own, and thus assist him in more fully explaining the subject of the lesson. Many instances of this nature have occurred in my own experience, and I have no doubt, other teachers will be ready to make the same acknowledgement.

All this, however, is a little beside the direct subject of the loss of time occasioned by this method of teaching. Still if we take a right view of the matter, I think any thing that tends to improve and enlighten the mind of the teacher cannot fail to aid in developing the mental faculties of the child, and thus conduce to the progress of his school, and if greater improvement is thus effected, a certain amount of time must consequently be saved.

The next point in connexion with this subject is, the injurious effects to the health, both of the mind and body which the study of long and difficult lessons might produce on children of feeble intellects, and weakly constitutions, for it tends to confuse and bewilder them, instead of causing a healthy growth and an increase of strength that a moderate amount of work, properly prepared, would gradually effect. Again, the constant fear of punishment which the child feels hanging over him, is itself often the source of many ills morally and physically, that we would fain attribute to any other cause than the right one. Look into the child's face and say whether the mind is at ease, and he is in the enjoyment of that childish happiness which ought to be plainly visible on his countenance. No, instead of this sorrow and misery are there clearly depicted and have, perhaps, already stunted the mind, and broken his spirit; and how is it possible that these effects can be produced, without a corresponding amount of injury to the body? A severe whipping, properly administered, once a day, would do him much less harm.

There is a law in existence against cruelty to animals of the inferior order; and a society formed in England of which I think the Prince of Wales is chairman, for the prevention of such acts and for bringing those who commit them to punishment. And are we I ask less guilty who practice systematic cruelty on unoffending human beings? Is it also to be wondered at that we do not secure the love and respect of children when we manifest so little regard for their feelings?—feelings too, which are sometimes of a most sensitive nature? Children have often a more correct sense of what is just and right than we are apt to give them credit for; and therefore, if we treat them harshly and unjustly, are we to be surprised if their feelings towards us are not marked with that regard and respect we so unreasonably and unjustly claim? If habitual cheerfulness, and ease of the mind, promote the health of the body, I think there is no need of saying any more in support of the assertions already advanced on this head.

The last reason I gave for a change in this method, was, because it is often a source of disquiet and annoyance to those parents who are either unable or unwilling to render the necessary assistance to their children in preparing the tasks appointed.

Every teacher knows this to be the truth. Ask the child why he did not prepare his lessons at home, and his answer frequently is—O

they were too hard. Well why did you not get your parents to assist you. "I asked them sir, but they were too busy." At other times they were too tired, or perhaps going out to spend the evening. From a feeling of shame the child is unwilling to tell you that his parents are unable to give him the help he needs and which he is entitled to; but we know that this is often the fact.

Now allow such to be the case, which I am sure few will deny, is justice done in expecting these lessons to be prepared, when the teacher, in most cases, gives out the lessons in the evening, without a word of explanation, and when the child gets home, determined, perhaps to exert himself to the uttermost, faithfully to perform his duty, when he finds the difficulties so great that he is discouraged and gives up in despair. And is this to be wondered at when we reflect that neither aid nor encouragement is to be expected from those who profess to be so deeply interested in his education? These very parents too would generally be the first to oppose the inauguration of a system by which their children could be relieved from the drudgery which cannot be performed alone and in which they cannot or will not assist them; notwithstanding they were fully convinced that their improvement would be accelerated ten fold by its introduction. The idea of children having nothing, or very little to do at home, would be sufficient to draw forth their condemnation of any system, no matter how good in other respects, if its tendency were to bring about or encourage such an alarming state of things. They do not consider that if the labouring man or the mechanic requires rest after eight or ten hours bodily work, surely the same privilege ought not to be denied to children after five or six hours close application, in school to the work of the brain, particularly when a comparison is made between the strength of the child and that of the man, and between mental and bodily labour.

When I commenced this paper it was my intention to give many examples, which have, at different times come under my notice, in confirmation of the opinion which has been expressed on this subject, but find that I have extended it to too great a length already, and would therefore only further remark,—That it will probably be said that I am condemning an old established custom in teaching, which our forefathers made, and one that has been approved of and followed to the present day, and am trying to bring about a change that I have not introduced into my own school. I must certainly plead guilty to the first part of this accusation, and am only partially free from the second part; but what I give my children to learn *by heart* at home amounts to very little and is given rather to satisfy parents than from the expectation that any good results will proceed from it.

I know, also, that by this very admission, I am laying myself open to blame for acting a false part. But a man must be possessed of a very high degree of moral courage to initiate, what would certainly be regarded as an innovation, and which would, in all probability, deprive him of his means of support, perhaps for years; for I am fully convinced that if I were to announce that no lessons should hereafter be prepared at home, my school would soon become very thinly attended. And the possibility of being able to convince parents that it would tend to promote the health and happiness of their children, as well as further their advancement in learning, would be almost as difficult as to remove a mountain, or cause the sea to dry up.

No, the change must come from the combined effort of many of our leading teachers; and be persisted in and followed out, till its effects on the mind and constitution of the child are so clearly visible, as to admit no longer of any doubt about the matter.

In conclusion I would say that I trust the subject of this paper will not be considered of little or no importance, for I can assure those who hear me, that after nearly thirty years experience in teaching, I am more and more impressed with the conviction that our duties and responsibilities in this matter are of the most weighty and serious nature, and the sooner we take a right view of them the better.

Conducting Recitations.

It is an educator's duty to study methods of developing the intellect of his pupils. It is not sufficient that he should content himself with a preparation concerning the subject to be presented; he should constantly strive to develop a system of imparting such knowledge in such a manner as shall best develop the pupil. There are evidently two primary objects to be regarded by the educator in conducting a recitation. These two are imparting information to the mind and developing the mental strength and powers of the pupil.

It is said that he who provides labor for the poor by which they can earn a living is a greater benefactor, and more truly wise, than he who simply gives from his own store. The philosophy of it undoubtedly is in the fact that he is the greatest benefactor who teaches self confidence, and hence self support. Thus is it in teaching. He is the best educator who teaches the pupil the most self reliance—who develops the greatest amount of mental power in the pupil.

What is more lamentable to a really true educator—one who is earnestly aware of the importance of this self reliance—than to see a recitation conducted in such a manner as to educate simply to self distrust and confusion.

So far as I am able to decide, there are two things that an educator should not do: allow pupils to recite while sitting; nor recite the lesson for the pupil. Let me illustrate.

A few months since I was present at an examination of a class of young ladies in Mental Philosophy. The teacher was a man of much experience, but I observed that there was a general lack of independence, interest, enthusiasm, while reciting, on the part of the class. The examination was creditable, but the instructor remarked to me that he had so much difficulty in securing recitations which were energetic, natural, full of life; that they were far too mechanical on the part of the young ladies, who recited simply from the head, not from the heart, soul. I observed that the class recited while sitting, and the teacher occasionally asked a question that very plainly suggested its answer. This method of reciting I deem calculated to prevent good recitations—good development of independence. The standing position is best adapted to enable one to express his thoughts freely and forcibly. Just imagine John B. Gough, or Henry Ward Beecher, addressing an audience while sitting in their chairs on the rostrum! Try it yourself, my kind reader, and see if you are not less energetic, less forcible, more restrained, less natural, in your reading while sitting than while standing—your thoughts flow less rapidly, vividly—you feel more inclined to be indolent—your blood flows more quietly. I once had a student—a young lady of medium ability—in Geometry. She did quite poorly for one who had studied it before as much as she had—three books of Legendre and six of Robinson's Geometry. I was obliged to recommend her to the beginning class, after a trial. She told me she had recited thus:—The teacher enunciated the propositions for the class—helped them to construct the figures, if they could not do them, and then if the pupils hesitated in the demonstrations he would always prompt; he never reviewed daily; thus he never had any failures! This young lady could do nothing at all but fail when required to do her own reciting, unaided by me; she had no self confidence; and constant fear encircled her about.

I attended an examination of a class in Geometry in one of our oldest Academies in this state, and was pained as well as astonished at what I saw. The class was in Bk. iv, in Legendre—they took the books to the board and drew the figures on the board from the book, and only closed it when called upon to recite, and then to be aided by the teacher if they hesitated.

If such teaching is correct then "woe is me!"

Suppose a teacher should relieve his pupil in piano music from fingering the difficult passages in the music by doing it for him at all times; how long would it be before such a pupil could play?

It would seem to be the part of good sense to require the class to do their own work. You may say that the pupils fail then so often. Very well; let them fail. But we have to go over the ground so slowly, if they must do all the reciting. Granted. A little food, when the digestive organs are healthy, gives more strength than much food swallowed when the organs are not capable of digesting it, because of dyspepsia.

I am asked if I would not explain anything in recitation. I would explain very much, but not until the class have recited, or tried to recite, and failed. The place for reciting is the place to discipline the class—the place to review—to explain more fully the ground already passed over, to drill and develop the faculties of the pupil that he may have command over them at all times.

Suppose you conduct the recitation entirely by question and answer, instead of simply announcing the topic and requiring the pupil to proceed with the entire discussion, or until requested to be seated. Do you not as questioner, do fully half of the reciting for the pupil? Does it not, as a general thing, take as much, or even more, knowledge of the subject to ask the questions intelligently than it does to answer them? You cannot be with your pupils in active life. They must know how to ask as well as answer questions. Many young men, when called upon to conduct business for themselves utterly fail. Why? Their fathers were good business men, but they did all the business themselves, requiring nothing of the sons but to look on. To look on simply, and to do, are two quite distinct things.

In music no one would think of striking half the notes on the key board, at every lesson, and let the pupil strike the other, and easier, half. Why do so in other things.

I have, at the present time, a pupil in Algebra—a lady of good abilities—who told me, but a few weeks since, that she used to recite well until she entered my class, but now she could do nothing; however, if "she had her old teacher she would now recite well." "Well,"

said I, "how did your old teacher conduct the recitation?" "By question and answer." "Prompt any?" "Sometimes." The young lady felt sad because she failed so much—but she soon could both commence and end a discussion without help—i. e., ask her own questions as well as answer them.

Suppose you wish to impress upon the class the fact that you are "posted?" Then occupy all the time yourself; ask no questions, require no answers; simply let your tongue loose and display yourself! But this is unworthy a teacher.

Let no books be used in recitation in almost all studies—use no book yourself. Your example will then have a very stimulating effect upon the class.

Another thing I would notice. Practice no set reviews, but review every day a portion of the ground already passed over during the term. Let the class understand they are held responsible for all passed over during so much of the term—thus proceed until the close of the term. You are then ready for examinations every day.

Many teachers fail because of the long lessons they assign. Assign enough, but do not forget that the pupil is still younger than you are.

Lastly, be earnest in the recitation room—let your manner be impressive, be indicative of the importance you feel and would have them feel; for if you do not feel interested you must not complain if your pupils do not.—*New York Teacher.*

J. H. H.

Too much Help.

A comparison is sometimes made between the pupils trained in cities who attend school nine or ten months in the year, and the pupils of schools in small towns who attend five or six months, and sometimes even less than that.

This comparison reveals the fact that, in many instances, the pupils in country schools attain an average proficiency in study fully equal to that of pupils in the city, and an average proficiency in health and energy of character much greater. So that, upon entering active business pursuits, the country boys continue in advance of their rivals bred in the city. Many of the most successful merchants and professional men in this State are pointed to, with the remark. "They received not their training from the city schools; they got their rudimental instruction in the old red school-house that stands near the cross-road upon a bleak field, many miles away from any populous town. But for some reason they prove far superior to those who have enjoyed the bountiful provision made for instruction in the city schools." Hence the inference that there is something wrong about the city schools, either in arrangement or instruction.

We assume that the error is one of practice, aud is constantly increasing; that it began in the metropolitan schools, and is permeating all the institutions for instruction of the country. The error may be briefly stated in this: "Too much direct help, too much pampering." A teacher comes before a class which is going to begin a new and difficult subject. He tells the class that their path is a perplexing one, but he will help them through. He directs their attention to the chief obstacles; tells in what the intricacies consist, and how they may be solved. He then leads them through, carefully guarding them against every error and mistake; and thus almost before the pupils are aware, with little work on their own part, with no excitement of curiosity or exercise of ingenuity, they are over the hard passage of their way, and pressing on still farther. That is what we mean by too much help. It secures a rapid advance, but gives no corresponding self-reliance or strength; it carries over much ground in one direction, but gives no independent originality wherewith to strike out new paths in other directions; and often places pupils rapidly so far onward, that, unaided they cannot find their way back. The habit is thus formed of stopping short at every difficulty, and waiting for help: aud the consequence is, that, when the obstacles are encountered that meet one at every step in the competition of practical life, there is no friendly arm to lean upon, no cultivated determination to brace up, but a faltering incompetency that ends in vain wishes and empty resolutions.

Analogous in its results to this constant helping in the pampering of pupils, which now seems to be regarded as almost indispensable. It takes the names of "something to interest pupils," "efforts to make school attractive," etc., etc. Now, we would yield to no one a stronger desire than we have to make schools both interesing and attractive. But we desire, first of all, to secure the development of a strong and resolute well-balanced character; we believe this can be attained only by severe discipline; and that you might as well look for the best bodily health when the child has had merely what the palate craves, as for the best mental health when there have been administered frequently, and in large quantities, as a part of school training, through the whole course of education, exercises which are designed merely for a temporary amusement. A diversion may be introduced in the form of a story, or accounts of travels and scientific discoveries, and thus interest may be awakened and curiosity sharpened. But this is liable to grow into a habit of pouring information upon pupils indiscriminately, and results in deadening the active receptivity which is necessary to the best acquisition.

We want in our schools a thorough drill in the branches of learning prescribed. Can we have this when teachers are constantly wandering all over the heavens above, the earth beneath, and the waters under the earth, in pursuit of facts foreign to the instruction demanded, and designed merely to interest? The object of our schools is, not to make of pupils walking encyclopædias, but to give them the power of mind whereby they can assimilate and generalize from such facts as they get in after-life. How often do we see those, who in youth were eminent for "general information," destitute of the culture or discipline that can make the information available for a good purpose! We are not prepared to advocate the disjointed training pursued in many country schools; but we do say that the pupils there are more often thrown upon their own resources and compelled to think for themselves; that their attention is confined to few things, and a thorough mastery of them; and that for this reason there is often a better result secured, than with all the improvements and advantages of the large schools, where the attention is distracted, and the instruction too widely diffused.

We admit that this peculiarity of country schools arises often from the lack of competent teachers. The very fact that scholars cannot find an explanation which they desire sets them to labor for it; and when thus obtained, it is worth much more than is it when all the difficult work has been done by other heads. The most valuable lessons in military strategy are not those which we learn from the history of armies, containing myriads of soldiers who have every advantage of position, equipment, and supplies; but rather from those who have been driven to discouraging extremities, and whose only salvation lies in the utmost efforts of every soldier. So *all* our lessons in teaching are not to be drived from the practice of these schools, which, by the furnishing of conveniences for the lame, halt, and blind, and applying them to the whole as well as to the sick, soon bring all to feel to constant need of a physician.—*Mass. Teacher.*

ARITHMETIC.

(Continued.)

Perhaps this is the proper place for the teacher to expound more fully the principles of multiplication and division, and to show how variously these can be worked.—Multiplication is a short-hand process of addition; division is a short-hand process of subtraction.—The teacher's duty is to illustrate to his pupils how variously required results in adding, subtracting, multiplying, and dividing can be worked out. The more variously the same result is obtained the wider the pupil's field of knowledge and experience becomes; and the greater the chance is, that if one particular view of a truth or subject does not lead to a correct knowledge of it, another may.—The intelligent wise-headed teacher studies how to reach his pupil's mind,—how to enlighten his understanding—how to exercise his judgment and reason, on every subject taught,—not by a one-sided view or mode of explanation, but by every side-view and way to make plain, he can conceive,—making each clear and thorough—penetrating and opening up each subject to its core......

Practice also should ever accompany explanations.

A child's knowledge of a truth may, even, after much pains on the part of the teacher, and of not a little effort on his own part, be still very hazy; but suitable and varied practice will both brighten his understanding and give growth to his skill.

Examples.—Multiplication.

1.	2.
37286	37286
264	264
149144 = 37286 × 4	7457200 = 37286 × 200
2237160 = 37286 × 60	2237160 = 37286 × 60
7457200 = 37286 × 200	149144 = 37286 × 4
Ans. 9,843,504 = 38286 × 264	9,843,504 = 37286 × 264

3.

37286 × 400 = 14914400

2 hund. = $\frac{1}{2}$ of 400 h. 7457200 = 37286 × 200
5 tens = $\frac{1}{4}$ of 200 h. 1864300 = 37286 × 50
1 ten = $\frac{1}{5}$ of 5 tens 372860 = 37286 × 10
2 units = $\frac{1}{5}$ of ten 74572 = 37286 × 10
2 do = $\frac{1}{5}$ of do 74572 = 37286 × 2

264 Ans. 9843504 = 37286 × 264

4.

300
264 37286
300
36
11185800

20 = $\frac{2}{5}$ 745720 = $\frac{2}{5}$ of 100 times.
10 = $\frac{1}{2}$ 372860 = $\frac{1}{2}$ of 20 do
5 = $\frac{1}{2}$ 186430 = $\frac{1}{2}$ of 10 do
1 = $\frac{1}{5}$ 37286 = $\frac{1}{5}$ of 5 do

36 134226 substracted.

Ans. 9843504 = 37286 × 264

5.

37286 × 1000

37286000

200 = $\frac{1}{50}$ 7457200 = product of 200
50 = $\frac{1}{4}$ 1864300 = do of 50
10 = $\frac{2}{5}$ 372860 = do of 10
2 = $\frac{1}{5}$ 74572 = do of 2
2 = $\frac{1}{5}$ 74572 = do of 2

264 Ans. 9843504 264

6.

37286 37286
200 8

7457200 · 298288
2386304 8

Ans. 9843504 2386304 = 64

7.

37286
)264 = 132

2 74572
1118580
3728600

4921752
2

Ans. 9843504

8.

37286
11

410146 = 11 times.
4

1640584 = 44 times.
6

Ans. 9843004 = 264 times.

9.

2) 37286 264
2
18643
528 528

149144
37286
93215

Ans. 9843504

10.

37286 8)264
8 33

298288
33

894864
894864

Ans. 9843504

11.

37286 8)264
8 11)33

298288 } × 11 3
298288 }

3281168
3

Ans. 9843504

12.

264 100)37286
100 $372\frac{86}{}$

26400
372

52800
184800
79200

9820800
22704 × $\frac{86}{100}$

Ans. 9843504

13.

37286
264

7457200 = 37286 × 200
149144 = 74572 × 002
2237160 = 74572 × 030

Ans. 9843504

14.

3728600
37286

3691314 = 99
2

7382628 = 198
2460876 = 37286 × 66

Ans. 9843504 = 37286 × 198 + 66

15.

37286 264
220 220

8202920 44
1640584 = 44

Ans. 9843504

More varieties might be given, but these, well illustrated with ample practice, should be sufficient to stir up the pupil's inquisitive and searching disposition, exercise and extend his ingenuity and skill—and thus help him on to a higher and more perfect knowledge of the powers and principles of numbers.—A correct knowledge of the preceding fifteen examples, should well prepare him for farther advances.—But in training in varieties, examples should have a graduative character, beginning with digits, as follows:

1. $5 \times 4 = 20$

2. $5 \times \frac{4}{2} \times 2 = 20$

3. $5 \times 2 \times \frac{4}{2} = 20$

4.
5 × 10 = 50
2 = $\frac{1}{5}$ of 10
5 = $\frac{1}{5}$ of 10
20

5.
5 × 1 = 5
5 × 1 = 5
5 × 1 = 5
5 × 1 = 5
20 1 20

6.
5 × 1 = 5
5 × 3 = 15
5 × 4 = 20

7. $4 \times \frac{5}{2} \times 2 = 20$

1. $8 \times 9 = 72$

2.
2)8 × 9 = 72
4 × 2
18 = 72

3.
3)9 × 8 = 72
3 24 = 32

4

$8 \times \frac{9}{3} = 62$

5

$3 \times 9 = 27$
$3 \times 9 = 27$
$2 \times 9 = 18$
$- \times -$ —
$8 \times 9 = 72$

6

$8 \times 9 = 72$
—
$3 = \frac{1}{3}$ of $9 = 24$
$3 = \frac{1}{3}$ of $9 = 24$
$3 = \frac{1}{3}$ of $9 = 25$
— —
$9 \times 8 = 72$

7

$8 \times 2 \times \frac{9}{2} = 72$

8

$8 \times 5 \times \frac{9}{5} = 72$

9

$9 \times 5 \times \frac{8}{5} = 72$

The same results obtained by addings and subtractings.

1

$36 \times 8 = 288$
12 ad. 2 sub.
— —
$48 \times 6 = 288$
$12 \times 8 \div 48 = 2$

2

$36 \times 8 = 288$
15 ad. $2\frac{6}{17}$ sub.
— —
$51 \times 5\frac{11}{17} = 288$
$15 \times 8 \div 51 = 2\frac{6}{17}$ sub.

3

$36 \times 8 = 288$
500 ad. $7\frac{31}{67}$ sub.
— —
$536 \times 0\frac{36}{67} = 288$

Adding to multipliers and subtracting from multiplicands.

1

$36 \times 8 = 288$
12 sub. 4 ad.
— —
$24 \times 12 = 288$
$36 \times 4 \div 12 = 12$ sub.

2

$36 \times 8 = 288$
20 sub. 10 ad.
— —
$16 \times 18 = 288$
$36 \times 10 \div 18 = 20$ sub.

3

$36 \times 8 = 288$
$13\frac{11}{13}$ sub. 5 ad.
— —
$22\frac{2}{13} \times 13 = 288$

Subtracting from multipliers and adding to multiplicands.

1

$36 \times 8 = 288$
60 ad. 5 sub.
— —
$96 \times 3 = 288$
$36 \times 5 \div 3 = 60$ ad.

2

$36 \times 8 = 288$
36 ad. 4 sub.
— —
$72 \times 4 = 288$
$36 \times 4 \div 4 = 36$ ad.

3

$36 \times 8 = 288$
108 ad. 6 sub.
— —
$144 \times 2 = 288$
$36 \times 6 \div 2 = 108$ ad

An example in dividing showing how the same quotient can be obtained by different processes.

Example.

1

346)256438(741 quot.
2422
———
1423
1384
———
398
346
———
52 rem.

2

346)256438(001
346
———
6092(017
5882
———
50210(145
50170
———
200040(578
199983 —
——— 741 quotient.
52 rem.

3

346)256438(570
197220
———
59218(171
19166 —
——— 741 quotient.
52 rem.

4

346)256438(018
6228
———
50210(145
50170
———
200040(578
199983 —
——— 741 quotient.
52 rem.

If we increase the divisor the dividend must also be increased in the same proportion to obtain the same quotient as follows:

346 256438
3 3
——— ———
1038) 769314(741 quotient.
7266
———
4271
4152
———
1194
1938
———
3) 156
———
52 rem.

Increasing the dividend requires an equal increase of the divisor; but when there is a remainder, it has to be divided by the figure or figures by which we increase either the divisor or dividend, as in the given example.

Diminishing the divisor or dividend a certain number of times, requires the other to be equally diminished to have the same quotient; and the remainder must be increased by the diminishing figure or figures.

Example.

2)346 2)256438
——— ———
173) 128219(741 quotient.
1211
———
711
692
———
199
173
———
26
2
———
52 rem.

JOHN BRUCE,
Inspector of Schools.

(To be continued.)

OFFICIAL NOTICES.



NOMINATIONS.

EXAMINERS.

His Excellency the Governor General in Council was pleased, on the 21st January last, to appoint the Reverend George Brown and Patrick Hackett, Esquire, members of the Board of Catholic Examiners for the District of Bedford, in the room and stead of the Reverends A. B. Dufresne and Charles Boucher who have left the District, and whose resignations in consequence His Excellency has been pleased to accept.

SCHOOL COMMISSIONERS.

His Excellency the Governor General in Council was pleased, on the 21st January last, to approve of the following appointments of School Commissioners, viz:—

County of Témiscouata.—Village of St. Edouard: Mr. William Hodgson.

County of Lotbinière.—St. Gilles : Mr. Michel Parent.
County of Vaudreuil—Ste. Marthe : Mr. Calixte Milard.
County of Chicoutimi.—Village of Bagotville : Reverend M. François Morin.
County of Dorchester.—Ste. Marguerite : M. Onésime Laflamme.

DIPLOMAS GRANTED BY BOARDS OF EXAMINERS.

RICHMOND BOARD OF EXAMINERS.

1st Class Elementary (E. & F.)—Mr. Charles Phil. Charpentier ; Miss Philomène Kérouac.
2nd Class Elementary (E.)—Misses Sarah MartinPearson and Eliza Lewis ; *(E. & F.)* Misses Louise Gauthier and Hermine Lyonnais.
Feb. 7, 1865.

J. H. GRAHAM,
Secretary.

BEDFORD BOARD OF EXAMINERS.

1st Class Elementary (E.)—Mr. Henry C. Knowlton and Miss Bridget Moran ; *(E. & F.)* Miss Lucy H. Moran ; *(E.)* Misses Arretta M. Sergeant, Martha D. Stone and Ennice Wallace.
2nd Class Elementary (E.)—Misses Delia R. Brownson, Sarah Butler, Caroline C. Hadley, Elizabeth Hase ; Mr. Daniel F. Chamberlin ; *(F.)* Miss Françoise A. Chartrand ; *(E.)* Misses Johanna C. Reid, Charlotte Ann Roberts and Mary Ann Savage.
Feb. 7, 1865.

W. GIBSON,
Secretary.

OTTAWA BOARD OF EXAMINERS.

1st Class Elementary (E.)—Misses Helen Dodge, Isabella Grant and Maria Mooney.
2nd Class Elementary (E.)—Misses Amelia Désilva, Mary Jane Jackson and Elizabeth Oakely.
Feb. 7, 1865.

JOHN R. WOODS,
Secretary.

GASPÉ BOARD OF EXAMINERS.

2nd Class Elementary (F.)—Elzéar Daigneault.
Feb. 7, 1865.

P. VIBERT, JR.,
Secretary.

QUEBEC BOARD OF PROTESTANT EXAMINERS.

2nd Class Elementary (E.)—Mr. Richard L. Redman ; Miss Anna M. Thompson.
Dec. 16, 1864.

D. WILKIE,
Secretary.

BOARD OF EXAMINERS OF THREE RIVERS.

1st Class Elementary (F.)—Misses Zanaïse Bourgeois and Julie Anne Houde.
2nd Class Elementary (F.)—Miss Marie Aveline Proulx.
Feb. 7, 1865.

J. M. DÉSILETS,
Secretary.

BONAVENTURE BOARD OF EXAMINERS.

1st Class Elementary (E.)—Miss Margaret Fairservice.
Feb. 7, 1865.

GEORGE KELLY,
Secretary *pro tem.*

RIMOUSKI BOARD OF EXAMINERS.

2nd Class Elementary (F.)—Miss Célina Lavoie.
Feb. 7, 1865.

P. C. DUMAS,
Secretary.

KAMOURASKA BOARD OF EXAMINERS.

1st Class Elementary (F.)—Misses Philomène Bernier, Eléonore Bouchard, Justine Langelier and Geneviève Lapointe.
Feb. 7, 1865.

P. DUMAIS,
Secretary.

SHERBROOKE BOARD OF EXAMINERS.

1st Class Academy (E. & F.)—Mr. Thomas S. Ball.
2nd Class Academy (E.)—Mr. Charles B. Daggett.
1st Class Elementary (E.)—Misses Emma C. Ball, Jane Cockburn, Adelaide Davis, Achsa M. Farnsworth ; Messrs. Robert McLeod, John J. Proctor ; *(E. & F.)* Misses Emma A. Sawyer, Arabine Williams, Jerusha Williams and Lucy A. Wilson.
2nd Class Elementary (E.)—Misses Ellen Bailey, Eliza Dongan, Anna Masia Hall, Irene Perkins ; Messrs. Oscar Lang and Justice J. Parker.
Feb. 7, 1865.

S. A. HURD,
Secretary.

QUEBEC BOARD OF CATHOLIC EXAMINERS.

1st Class Elementary (F.)—Misses Philomène Beaudry, Marie Eugénie Boisvert and Adèle Estelle de St. George.
2nd Class Elementary (E.)—Miss Adèle Eugénie Estelle de St. George ; *(F.)* Miss Agnès Fauchon.
Feb. 7, 1865.

N. LACASSE,
Secretary.

MONTREAL BOARD OF CATHOLIC EXAMINERS.

1st Class Model School (F.)—Mr. Edouard Simays ; Misses Marie Hébert and Alphonsine M. Laberge.
1st Class Elementary (F.)—Mr. Joseph Alphonse Allard ; Misses Marceline Couture, Esther Emilie Gauthier, Marie Sophie Guerrier, Rose de Lima Lagacé, Marie Célina Leduc, Julie L'Heureux, Valérie Lussier, Odile Miron, Denise Picard, Zoé Potel, Césarine Ratel, Adèle Véronneau St. Denis ; *(E.)* Miss Anna McHugh.
2nd Class Elementary (F.)—Misses Philomène Bouthillier, Phélonise Gendron, Marie Lydie Langlois, Flavie Leroux and Marie Louise Pigeon.
Feb. 7th and 8th, 1865.

F. X. VALADE,
Secretary.

MONTREEAL BOARD OF PROTESTANT EXAMINERS.

1st Class Academy (E.)—Messrs. John McIntosh and Isaac Van Wart Schenck.
2nd Class Academy (E.)—Mr. William F. Eastwood.
1st Class Model School (E.)—Miss Elizabeth Maxwell.
1st Class Elementary (E.)—Misses Lilia Ainsworth, Ruth Ann Baldwin, Elizabeth Collings ; Mr. John McGruer.
2nd Class Elementary (E.)—Misses Jamosina Copeland, Margaret McCrimmon and Elizabeth McGarry.
Feb. 7th and 8th, 1865.

P. A. GIBSON,
Secretary.

SITUATIONS WANTED.

An experienced teacher holding an Academy Diploma wishes to obtain a situation in an Academy. A French School where he would have an opportunity of learning the French language while teaching English would be preferred. Apply at the Education Office.

An English teacher with a Model school Diploma (English and French), and who has had much experience in teaching, is desirous of obtaining employment. Apply at the Education Office.

A gentleman who is competent to teach French, Latin, Greek, mathematics and all the branches included in an academic course, is desirous of obtaining employment. Apply at the Education Office.

JOURNAL OF EDUCATION.

MONTREAL (LOWER CANADA), FEBRUARY AND MARCH, 1865.

To Our Subscribers.

We regret the necessity which compels us so frequently to recur to our out-standing accounts, but so many of our subscribers are in arrears that the time has come when we must insist on payment. We would therefore notify such as are indebted for

more than the amount of their subscription for the current year that unless prompt payment be made, the Journal will be discontinued and legal proceedings instituted for the recovery of all arrears, although we confess that this alternative is repugnant to our feelings and would gladly be avoided.

All remittances, whether for the Journal or the Teachers' Savings Fund, should be made to A. de Lusignan Esq., Clerk of Accounts and Statistics.

A few words more on the question of Protestant Education in Lower Canada.

As we have said before, we have, on principle, abstained from all subjects of controversy in this journal; but the same reason which, some time ago, induced us to make a few observations on the meeting for the advancement of Protestant Education compels us now to contradict some assertions that have been published since.

Our Table showing the apportionment of the Superior Education Grant for instance, has been severely criticised because the bursaries given by government to the High Schools of Quebec and Montreal had been included in the grants put down to these institutions as were also the pensions and other allowances drawn by the McGill College. But, we may ask, are not the sums thus paid really subsidies to Protestant institutions, and were not the bursaries accorded to the Institute for the Deaf and Dumb at Montreal, similarly included in the grants to Catholic institutions? And here it should be observed that almost all the subsidized institutions maintain a certain number of bursars; and the government holds this as one of the conditions favorable to the granting of aid, so much so that particular mention of the fact is to be made in the annual reports. But were these amounts deducted on both sides, we should still find that the share absorbed by Protestant institutions is greater than that which the ratio of students or of the population warrants.

It has been said also that many institutions on the Superior Education list are undeserving of the position thus assigned them; but this is an assertion which completely ignores the fact that academies and model schools are placed in this very category by the Act specially providing for Superior Education. Without stopping to examine whether the reproach is well or ill founded or whether it applies with greater force to Catholic or to Protestant schools, it is evident that the moment it has been demonstrated that Protestant institutions receive a double share in the whole grant it is not they, but the Catholic colleges that have cause to complain of the grants to so-called undeserving academies and model schools.

Many other assertions invite criticism but we shall confine our remarks to the most important.

In a lecture already adverted to in these columns, Principal Dawson, while rendering perfect justice to the Department as to the past though expressing fear for the future under the confederation, commented upon the Third Reader published by the *Brothers of the Christian Schools* in the United States, which, he said, contained many things inconsistent with British sovereignty. It will suffice to say that this book has never received the sanction of the Council of Public Instruction.

Again, Principal Graham, who has published three voluminous letters in the *Montreal Herald*, quotes passages from Garneau's History of Canada which he declares to be hostile to the British Government. We shall discuss neither the merit nor the appositness of these quotations but shall merely observe that the extracts in question are taken from the preface to the large work published in three volumes, and that the Council of Public Instruction has only approved the school abridgment in which these passages do not occur. An abridged history by Mrs. Roy, has also been approved in the same manner. We have never admitted as Mr. Graham pretends, that the examination papers were drawn up exclusively from Mr. Garneau's work; on the contrary they were based on history itself and framed by a person who had studied the subject at its source. If we have said that candidates for teachers' certificates were bound to prepare themselves with the assistance of Mr. Garneau's history only in as far as that work was the best for the purpose, we have simply enunciated a patent truth, because the larger work of this author is, in fact, as yet the only one of that extent comprising the whole history of Canada. Mr. Graham insists on what he designates as the questions from the apocryphal books laid down in the examination papers on sacred history. The subject, we beg to remind him, is not theology but history; and those who hold that the book of the Machabees is not an inspired work cannot deny that it is valuable in an historical point of view. Besides, the matter does not, as we have said before, come within our province; the views of Protestant theologians have representatives in the Council of Public Instruction on whom nothing objectionable would have been imposed. (1)

Mr. Graham is especially irritated at certain observations which, he believes, go to impugn his veracity; the reporters alone, it appears, are to blame in the matter. He did not say that there was no examination on arithmetic, but that the tests applied were insufficient. Even as thus amended his strictures are still open to discussion; and very few persons will be found who shall accept as incontrovertible an assertion implying that a candidate who can solve any given problem in fractions, or in interest, does not know the four fundamental rules of arithmetic. The examination papers, it should also be added, only aim at establishing a *minimum* of examination.

Mr. Graham also denies having said that the Superintendent had attributed the reduction of the grant in the case of the St. Francis College to the reason which he gives, and we are now told that the explanation came verbally from one of the officers of the Department. In that case it should not have been made the subject of an attack since he had received, a few days afterwards, an authentic reply to his official letter informing him of the real cause to which the reduction was to be referred.

It would also be edifying to know when and where the present Superintendent assumed the title of Minister of Public Instruction as Mr. Graham asserts in one of his letters.

Lastly, as a specimen of the kind of matter which fills the eighteen columns taken up by his letters, we will only mention the reproach addressed to the Department because one Protestant

(1) The questions that have reference to the Book of the Machabees are the following:

56. Give an account of the martyrdom of the old man Eleazar and of the Machabees.

57. What was the end of Antiochus?

58. Relate the chief exploits of Judas Machabœus.

59. What was the condition of Judea from the death of Judas to the accession of Herod?

institution only has found a place on the list of girls' academies. The reason is simply this, *there were no applications* — the Protestant academies being almost without exception open to both sexes. It would be just as reasonable to complain that the Laval University is not on the list, despite the fact that no application has ever been made on its behalf. As to the rest, Mr. Graham may have already convinced himself of the truth of the proverb, by no means apocryphal, which declares that no man is a prophet in his own country. His letters have been answered by a newspaper published in the locality in which the Principal resides — the *Richmond Guardian* — in terms much more severe than any we should have cared to employ. We make the following extract for the edification of our readers:

"We insert to day Principal Graham's first reply to the strictures of the Superintendent of Education upon his speech, and those of the other gentlemen who inaugurated the agitation for the protection of Protestant Educational interests, at the recent Convention at Montreal. We shall of course publish those parts of the hon. Superintendent's review to which reference is made in the course of the discussion. We regret that the length of the review prevents its insertion in full in these columns. We considered it at the time a most complete, exhaustive, and crushing production—and the subsequent continuance of the agitation by the leaders of the movement in question is only another instance showing the persistance with which men cling to exploded theories. We have not the ghost of a shadow of sympathy with much that has been urged in opposition to the school law *per se*, or its administration by Dr. Chauveau, and are of opinion that the objections that have so far been given prominence to, in recent letters and speeches, will not be endorsed by those who have to do with the management of our Common Schools; in others mere side issues have been raised — as in Principal Graham's reply. That the system is defective in many respects we admit—in some essential particulars perhaps. But we deprecate any radical change as being utterly uncalled for; and that the present law or its administration by Dr. Chauveau is partial in its operation, we altogether deny. So far the agitation, while it has been characterized by a great amount of gas, has utterly failed to throw a solitary ray of light upon a very difficult subject."

Twenty-fourth Convention of the Teachers' Association in connection with the Jacques Cartier Normal School,

HELD OCT. 14, 1864 AND JAN. 29, 1865.

The chair having been taken at 9 o'clock A. M., the minutes of the last meeting were read and adopted.

Mr. Cassegrain read a paper on *Intuition.*

The following subject, proposed by the President, was then debated: *What branches should be taught in Elementary and Model Schools respectively, and how far should each be studied?*

Rev. Mr. Verreau opened the discussion, ably expounding the opinions held on these points by divers authorities, and was followed by Mr. Caron, Inspector of Schools, and Messrs. Emard, Simays and Archambault.

The Superintendent of Education then made some observations on the subject of the debate, explaining how different opinions might be reconciled. He recommended the classification of the subjects to be taught into two categories, the first to include all the branches of which the teaching should be made obligatory, the other such as might be taught or omitted at pleasure. The first of these divisions would naturally include reading, writing, catechism, arithmetic, elements of grammar and of geography; the second, reading with analysis, history, book-keeping, and the elements of agriculture. Object lessons, he added, should be introduced in all the schools, because, while imparting instruction, they had the effect of diversifying the studies and rendering them more agreeable.

The following table was then, after some further discussion, adopted by the meeting:

ELEMENTARY SCHOOLS.

Subjects.	*How to be taught.*
Reading	Not limited.
Writing	do
Arithmetic	As far as Proportion.
Catechism	Not literally.
Grammar	Elements.
Geography	do
History of Canada	do
Sacred History	do
Object Lessons	do

MODEL SCHOOLS.

Obligatory branches.	*How to be taught.*
Reading	With analysis.
Writing	Not limited.
Arithmetic	In all its branches.
Catechism	Literally.
Grammar	Syntax.
Letter writing	Elements.
Geography	With full particulars.
History of Canada	do
Sacred History	do
Book-keeping	Single and Double entry.
Optional branches.	
Literature	Elements.
Agriculture	do
Geometry	do
Algebra	do
Mensuration	do
Surveying	do

Mr. Valade, School Inspector, delivered a lecture on the *History of Canada;* after which, on motion of Mr. Paradis, the meeting adjourned to the last Friday in May.

Messrs. Boudrias, Priou, Bellerose and H. Pesant promised lectures for the next convention, when the following subjects will also be debated: *What are the best methods of teaching simple and compound Proportion?* and *What is the best French Grammar?*

Twenty-fourth Convention of the Teachers' Association in connection with the Laval Normal School.

HELD ON THE 27TH AND 28TH JAN. 1865.

In the absence of the Secretary, Mr. Lacasse was requested to act as such *pro tempore.*

The minutes of the last meeting having been read and adopted, Mr. St. Hilaire delivered a lecture on *Education.*

The Superintendent addressed the teachers present on various educational subjects of practical importance, such as reading with critical analysis, mental arithmetic, object lessons and the use of the black board.

The meeting then adjourned to the following day.

SECOND SITTING.

Mr. Bardy, Inspector of Schools, read a paper on the *Duties of School Inspectors;* after which the following subject was debated: *What are the principal amendments to be made in the School Laws in the interest of teachers?*

The Council of Public Instruction, the Department, the Savings Fund and the subject of teachers' salaries formed as many different points in the debate, which stands adjourned to the next meeting.

It was then, on motion of Mr. Dufresne, seconded by Mr. Tardif, unanimously

Resolved, — That in the opinion of this meeting the Rev. Mr. Langevin's treatise on the Art of Teaching is in every respect an excellent work, and is destined to supply a want long felt by the managers of schools in Lower Canada.

Two other resolutions recommending the work above mentioned to families, and more especially to School Inspectors and teachers, were also agreed to.

It was further resolved, on motion of Mr. Lacasse, that the Secretary

be directed to apply to the Inspectors of Schools for lists of all the teachers employed in their respective districts.

The Hon. P. J. O. Chauveau made some observations on the subject of the proposed amendments in the School Laws with the view of giving the teachers the benefit of his counsels in the discussion of that very important question.

A vote of thanks to the Superintendent for his attention to the Association closed the proceedings of the day.

Messrs. Thibault, Pelletier and Potvin entered their names as lecturers at the next meeting.

Notices of Books and Publications.

RYERSON.—Remarks on the new Separate School agitation; By Dr. Ryerson. Lovell & Gibson, Publishers, Toronto; 1865.—26 pp.

SAGARD.—*Histoire du Canada;* By Frère Gabriel Sagard, Théodat. *Fac-simile* of the edition of 1636; Paris, 1st. vol. Tross. 12 fr.

Sagard's History of Canada published in 1636, of which this is an exact *fac-simile*, had become exceedingly rare, only two copies being known to exist in this country—one in the library of the Laval University, the other in the possession of one of our ablest collectors. *Le grand voyage au pays des Hurons*, by the same author, has also become almost a literary curiosity, six copies only, as far as we know, being now in Canada. We have recently had occasion to notice the *fac-simile* reprint of a still rarer work, *i. e.* Cartier's Second Voyage to Canada, of which the only copy known to exist is that in the possession of the British Museum. The present reprint will be in four volumes and will be sold at 48 frs.

CARAYON.—*Premières missions des Jésuites au Canada. Lettres et documents inédits.* Published by le P. A. Carayon; Paris, 1 vol. 8vo. xvi-304 p. 12 fr.

NAPOLÉON III.—*Histoire de Jules César avec une préface par S. M. l'Empereur des Français;* vol. 1st, large 4to, vi-361 p., Paris. With four maps and a Portrait of Julius Cæsar.

English and German translations are being prepared simultaneously. The Sultan has also ordered a translation in the Turkish language.

MARCOU.—*Notice sur les gisements des lentilles trilobitifères taconiques de la Pointe-Lévis au Canada, par M. Jules Marcou, (extrait des Bulletins de la société Géologique de France);* Paris, 16 p. and 2 Plates.

MARTIGNY.—*Dictionnaire des antiquités chrétiennes, contenant le résumé de tout ce qu'il est essentiel de connaître sur les origines chrétiennes jusqu'au moyen âge exclusivement, ouvrage accompagné de* 270 *gravures;* 8 vo, viii-681 p. Paris, Hachette. 15 fr.

LE FOYER CANADIEN.—The first four numbers for 1865 which come to hand under the same cover, contain among other articles, an excellent biographical sketch of the Rev. abbé Ferland, by Mr. Lajoie, and an essay by Mr. LaRue on the historical songs of Canada which is a sequel to his former article on the *popular* ballads current among the colonists.

GAGNON.—*Les chansons populaires du Canada, recueillies et publiées avec annotations, paroles et musique, par M. Ernest Gagnon;* 1st Part. Office of *Le Foyer.*

CAUCHON.—*L'Union des Provinces de l'Amérique Britannique du Nord, par l'Honorable Joseph Cauchon;* Quebec, 8vo. 152 p. Côté. The same work in English, translated by Mr. Macauley.

CASGRAIN.—*Histoire de la Mère Marie de l'Incarnation, première Supérieure des Ursulines de la Nouvelle-France, précédée d'une esquisse sur l'histoire religieuse des premiers temps de cette colonie, par l'abbé H. R. Casgrain;* Quebec, 8vo. 467 p. G. E. Desbarats.

MONTHLY SUMMARY.

EDUCATIONAL INTELLIGENCE.

—Education as well as patriotism mourns the death of Edward Everett. Besides the numerous high civil and diplomatic offices which he adorned, he was for four years a laborious teacher—professor of Greek in Harvard College. Though but twenty-one years of age, when he received this appointment, his lectures gave a new impulse to the cause of Greek literature in America. During his professorship he translated Buttmann's Greek Grammar and edited the *North American Review.* While acting as governor, he was very efficient in the organization of the Board of Education, and founding the normal schools. The state has ever had reason to regret that his cherished plan of devoting the "surplus revenue of the United States," to the school-fund, was not adopted. His lectures and addresses on education alone are monuments of his masterly eloquence, as well as his zeal in behalf of public instruction. Mr. Everett has been present at every examination and exhibition of the Everett Grammar School, Boston, in which he took a deep interest. The schools of Boston closed on the day of his funeral.—*Massachusetts Teacher.*

—The Roman Catholic population of this city may take credit to themselves for their well appointed educational establishments, and more especially for being the first this fall to set up night-schools for young men. In other cities night-schools are carried on under the auspices of Mechanics' Institutes, and the scheme is made extremely efficient by the addition of classes for young women. Indeed a Mechanics' Institute that does not embrace some means for educating young men other than the circulation of books and the keeping up a reading room is a mere sham. The lending library will be found patronized only by the novel reader or literary dibbler, while books of instruction in the practical arts an sciences are untouched, because the young people who resort to these places for mental food have not the elementary education necessary to enable them to read scientific books with profit to themselves. A library is merely a help to a system of instruction. An advertisement appeared in our columns lately, on behalf of those students who wish to devote a part of their time to teaching. Now, the abilities of some of these young men might be turned to account in teaching night schools. It is to be hoped the hint will not be lost, and that our Protestant population will see the necessity for these schols as well as Roman Catholics.—*Kingston News.*

LITERARY INTELLIGENCE.

—M. Edmond About wrote in a report of the Fine Arts Exhibition, "M. Lepere is skilful, educated, more than intelligent." M. Lepere inquired, by note, of the writer what he meant. "What do you mean to say, sir? I am very much afraid you mean to say that I am better educated than intelligent, and that the comma signifies nothing. And even if it is there, it might not have been there." M. About replied: "The comma proves, sir, that I look upon you as a man who is educated, and more than intelligent." M. Lepere was not satisfied, and appealed to the law to redress his grievances. M. About answered: "I am challenged to explain, and say that if that comma be a serious, solid, established, intentional comma, and if I meant to say that M. Lepere was both an educated man and a man of remarkable intelligence, I hasten to declare that I was still under that impression when I wrote my article, that is to say, *a fortnight ago.*—*Publishers' Circular.*

—From a document recently published, it appears that the Imperial Library of France (sometimes called the Royal and sometimes the National Library) contains 2 million printed volumes, 200,000 manuscripts, 3 million prints, and over 300,000 charts and topographical maps, sketches &c., besides its valuable collections of medals and antiques.—Paris *Union.*

— Public lectures by eminent men are much in fashion just now in France. Among those who have recently applied for permission to participate in this mode of popular instruction are the Prince de Broglie, and counts de Montalembert and de Falloux.

SCIENTIFIC INTELLIGENCE.

—Life everywhere! The air is crowded with birds—beautiful, tender, intelligent birds, to whom life is a song and a thrilling anxiety—the anxiety of love. The air is swarming with insects—those little animated miracles. The waters are peopled with innumerable forms—from the animalcule, so small that one hundred and fifty millions of them would not weigh a grain, to the whale, so large that it seems an island as it sleeps upon the waves. The bed of the sea is alive with polyps, carps, star-fishes, and with shell-animalcules. The rugged face of the rock is scarred by the silent boring of soft creatures, and blackened with countless muscles, barnacles and limpets.

Life everywhere! On the earth, in the earth, crawling, creeping, burrowing, boring, leaping, running. If the sequestered coolness of the wood tempt us to saunter into its checkered shade, we are saluted by the din of numerous insects, the twitter of birds, the scrambling of squirrels, the startled rush of unseen beasts, all telling how populous is this seeming solitude.—If we pause before a tree, or shrub, or plant, our cursory and half-abstracted glance detects a colony of various inhabitants. We pluck a flower, and in its bosom we see many a charming insect busy in its appointed labor. We pick up a fallen leaf, and if nothing is visible on it, there is probably the trace of an insect larva hidden in its tissue, and awaiting its development. The drop of dew upon this leaf will probably contain its animals, under the microscope. The same microscope reveals that the "blood-rain" suddenly appearing on bread and awakening superstitious terrors, is nothing but a collection of minute animals (*Monas prodigosa*); and that the vast tracts of snow which are reddened in a single night, owe their color to the marvelous rapidity in reproduction of a minute plant (*Protaccus nivalis.*) The very mold which covers our cheese, our bread, our jam, or our ink, and disfigures our damp walls, is nothing but a collection of plants. The many colored fire which sparkles

on the surface of a summer sea at night, as the vessel plows her way, or which drips from the oars in lines of jeweled light is produced by millions of minute animals.—*New York Teacher.*

—*The American Academy of Sciences* held its annual meeting in Washington last month. Prof. Agassiz read a paper "On glacial phenomena and the present configuration of the State of Maine," which gave rise to an animated discussion. Some of the other papers read were: "On the dimensions and proportions of American soldiers," by Dr. B. A. Gould of New York; "On a method of exhibiting certain statistics of hospitals," by Dr. John L. Leconte; "On the changes that have taken place on Charleston bar since the sinking of the obstructions, as developed by the coast-survey," by Prof. J. E. Hilgard. Gen. Meigs, Prof. O. M. Hood, and Dr. Kirtland have been elected to the vacancies in the American Academy of Sciences, caused by the deaths of Gen. Totten and Professors Silliman and Hubbard. The corresponding members elect are Sir R. I. Murchison, geologist, president of the royal society; Alexander Braun, the Prussian botanist; G. B. Aing, astronomer royal; F. Wœhler and Victor Reynault, chemist.—*Mass. Teacher.*

NECROLOGICAL INTELLIGENCE.

— The death of the Rev. Abbé Ferland which occurred suddenly at Quebec on the 11th January last, leaves a blank that will be very sensibly felt in the Canadian world of letters. As Chaplain of the garrison, his kindness and urbanity had endeared to him many friends, while his acknowledged talent as a writer had found a host of admirers among his fellow countrymen and the reading public generally. Mr. Ferland (Jean B. Antoine) was born at Montreal on the 25th December 1805 and had, therefore, just completed his 59th year when he died. He was of an old family that, coming from Poitou, France, had settled on the Island of Orleans and whose name was originally Freland. The subject of our sketch, when a boy, proceeded with his parents to Kingston and there received a part of his education under the care of Mgr. Gaulin, the bishop of that diocese, who, perceiving the capabilities of his young pupil, transferred him to the college of Nicolet, where he completed his studies and remained as professor long after he had been ordained a priest. Having, as *curé*, ministered to the spiritual wants of several parishes successively, and having also creditably acquitted himself of several missions of more or less importance, he was appointed Professor of History at the Laval University and Chaplain to his co-religionists in garrison at Quebec, for which ministry his perfect knowledge of the English tongue and his amiable disposition and manners rendered him eminently qualified. His funeral service was performed in the Cathedral, the archbishop officiating, and Col. Gordon, the officers of the garrison and several detachments of troops under arms being in attendance.

—It is with extreme regret that we are called upon to record the death of the Hon. George Moffatt which occurred rather unexpectedly on the morning of the 26th February at his residence in Montreal.

Mr. Moffatt was born on the 13th August 1787, at Sidehead, in Weredale, Durham county, England, and was only 13 years of age when he came to Canada on the invitation of Mr. Ogilvy of the firm of Parker, Gerrard & Ogilvy. He was educated at Sorel, under the care of Mr. Nelson, father of Drs. Robert and Wolfred Nelson, and at an early age entered the service of the above named firm, for many years one of the most influential in the country. He subsequently passed into the employment of Messrs. McTavish & McGillevray, then a leading house engaged in the fur trade, and, in the interest of his new employers, attended many adventurous expeditions into the great Nor'-west territory.

For more than 50 years he was a partner in the house of Gerrard, Gillespie & Moffatt which at his death still existed under the name of Gillespie, Moffatt & Co. In 1829, he was appointed a member of the Legislative Council of Lower Canada by Sir James Kempt, and during the rebellion formed part of the *Special Council.* In 1841 he was, together with Mr. Benjamin Holmes, elected to represent Montreal in the first Parliament of United Canada. Mr. Moffatt had been for some time previously the leader of the British party in Lower Canada, and had taken a very active part in the political contests of this eventful period. An incident related by the *Montreal Gazette*, which happened about this time, will aptly illustrate his firmness in exacting the respect which he held to be due to the dignity of that branch of the Legislature of which he then formed a part.

While in England, Lord Melbourne having, at an interview, made use of the expression *upstarts* in referring to the Legislative councillors, our colonial representative at once wrote a letter to the minister which compelled him to make a full apology.

In 1843, being opposed to the policy of the Baldwin-Lafontaine cabinet, whose decision to remove the seat of Government from Kingston to Montreal he viewed in the light of a breach of faith towards Upper Canada—the possession of the capital having been guaranteed to that section of the province by Lord Sydenham—Mr. Moffatt chose rather to resign than vote against the material interests of his constituents or against his own personal convictions. He also declined the honor of a seat in the Upper House proffered by Lord Metcalfe, believing that he could not accept of any compensation for a sacrifice made to his principles. Such personal traits indicate a proud and noble character and reflect honor on the memory of a statesman. During the crisis of 1843-1844, he naturally sided with Lord Metcalfe, and, together with Mr. de Bleury, again contested the election for the city of Montreal with the Opposition candidates, Messrs. Drummond and Beaubien. A violent struggle ensued, but the ministerialists were declared the victors. At the following general election he declined the candidature and withdrew altogether from the political arena never again to enter it, except momentarily during the excitement which attended the passage of the *Rebellion Losses Bill*, a measure which he opposed.

Mr. Moffatt was rather above the medium height, with a fine, open countenance, very dignified yet graceful in his bearing. Although not eloquent, he spoke with force and his words carried conviction to the minds of his hearers. The evening before his death he had remained in his office until six o'clock closing his letters for the European packet, and appeared to be in his usual good health and spirits. He had attained the age of 77 years when he died.

— Two gentlemen who in their time have been instrumental in promoting Education in this country, and who have now passed away from the scene of their labors, claim a brief notice at our hands; we allude to Messrs. Burrage and Jeffrey Hale. The first, who had come to Canada to take charge of a grammar school under the auspices of the Royal Institution, was during many years secretary to that corporation, and when he died, was still in receipt of a pension for the services he had rendered in that capacity. He had many pupils in Quebec, where he also conducted an academy at which several prominent men of that city were formed. Mr. Jeffrey Hale was the son of Receiver General Hale, and a zealous and liberal friend of learning. He founded and maintained several schools and acted gratuitously as secretary to several benevolent and charitable societies during many years. He was the brother of the Hon. Messrs. Hale of Portneuf and Sherbrooke.

STATISTICAL INTELLIGENCE.

—The Postmaster-General's report for 1863 shows that the correspondence of the kingdom has risen from about 70,000,000 of letters in 1839 (the last year preceding the introduction of penny postage) to upwards of 640,000,000 of letters in 1863. The tables show that the increase in the number of receptacles for letters throughout the kingdom has increased at the rate of 52 per cent., whilst the inhabited houses throughout the kingdom have increased at the rate of only 8 per cent. The foreign and colonial letters coming into the United Kingdom for delivery are about one-fifth of the whole number of letters delivered, and the letters despatched to foreign countries and colonies are nearly equal in number to those which are received. The most remarkable increase is in the case of France. In 1854, before the reduction of postage thither, the correspondence amounted only to 3,000,000 letters; in 1857 it was 4,206,000; and in 1863 it had reached 6,373,000. It is believed that 15 per cent. of the total number of letters posted in London contain printed enclosures, mostly advertisements.

OFFICIAL DOCUMENTS

TABLE of the Apportionment of the Superior Education Fund for 1864, under the Act 18th Vict., Cap. 54.

LIST No. 1.—UNIVERSITIES.

NAME OF INSTITUTION.	Number of pupils.	Annual grant for 1863.	Annual grant for 1864.
McGill College	292	2407 00	2359 00
To the same for one year's salary of the Secretary to the Royal Institution, the salary of the Messenger, and for contingent expenses	....	671 00	671 00
Bishop's College	167	1500 00	1687 00
Total			4717 00

List No. 2.—Classical Colleges.

Name of institution.	Number of pupils.	Annual grant for 1863.	Annual grant for 1864.
Nicolet	249	1721 00	1687 00
St. Hyacinthe	231	1721 00	1687 00
Ste. Thérèse	211	1377 00	1350 00
Ste. Anne de la Pocatière	252	1721 00	1687 00
L'Assomption	191	1377 00	1350 00
Ste. Marie, (Montreal)	238	1377 00	1350 00
High School of McGill College	250	1128 00	1128 00
" " of Quebec, for the education of 30 pupils named by Government	137	1128 00	1128 00
St. Francis, Richmond	120	750 00	1012 00
Three Rivers	103	600 00	588 00
Morrin	30	400 00	392 00
Total			13359 00

List No. 3.—Industrial Colleges.

Name of institution.	Number of pupils.	Annual grant for 1863.	Annual grant for 1864.
Joliette	141	845 00	829 00
Masson	277	1000 00	900 00
Notre-Dame de Lévis	150	845 00	829 00
St. Michel de Bellechasse	136	845 00	829 00
Laval	84	338 00	332 00
Rigaud	145	845 00	829 00
Ste. Marie de Monnoir	174	500 00	580 00
Ste. Marie de Beauce	121	338 00	332 00
Rimouski	115	500 00	490 00
Lachute	182	178 00	225 00
Verchères	167	338 00	332 00
Varennes	105	253 00	248 00
Sherbrooke	55	253 00	248 00
Longueuil	337	342 00	336 00
St. Laurent	246	500 00	490 00
Total			7829 00

List No. 4.—Academies for Boys, or Mixed.

Name of institution.	Number of pupils.	Annual grant for 1863.	Annual grant for 1864.
Aylmer, (Catholic)	75	228 00	222 00
Aylmer, (Protestant)	34	228 00	222 00
Beauharnais, St. Clément	228	228 00	222 00
Bonin, St. Andrews, Argenteuil	126	228 00	222 00
Baie du Febvre	146	152 00	148 00
Baie St. Paul	70	169 00	164 00
Barnston	60	152 00	148 00
Berthier	140	340 00	330 00
Buckingham	49	152 00	148 00
Belœil	84	340 00	330 00
Chambly	75	178 00	173 00
Cap Santé	18	152 00	148 00
Clarenceville	63	304 00	295 00
Clarendon	34	152 00	148 00
Cassville	75	152 00	148 00
Compton	82	152 00	148 00
Cookshire	48	152 00	148 00
St. Cyprien	140	152 00	148 00
Charleston	73	480 00	300 00
Danville	107	228 00	222 00
Dudswell	40	152 00	148 00
Dunham	65	304 00	295 00
Durham, No. 1	62	135 00	131 00
St. Eustache	105	228 00	222 00
Farnham, (Catholic)	238	203 00	197 00
Farnham, (Protestant)	50	228 00	222 00
Freleighsburg	55	203 00	197 00
St. Colomban de Sillery	195	152 00	148 00
Ste. Foye	55	152 00	148 00
Gentilly	108	152 00	148 00
Granby	119	304 00	295 00
Georgeville	55	152 00	148 00
St. Grégoire	116	152 00	148 00
Huntingdon	88	338 00	328 00
St. John, Dorchester, (Catholic)	267	304 00	295 00
St. John, Dorchester, (Protestant)	39	304 00	295 00
St. Jean, Isle d'Orléans	103	152 00	148 00
Knowlton	65	304 00	295 00
Kamouraska	75	338 00	328 00
Laprairie	92	203 00	197 00
Lotbinière	31	135 00	131 00
L'Islet	105	228 00	222 00
Montreal Catholic Commercial Academy	142	228 00	222 00
Montmagny	233	253 00	246 00
Ste. Marthe	80	152 00	148 00
Missisquoi	40	233 00	226 00
Pointe-aux-Trembles, Hochelaga	80	304 00	295 00
Phillipsburg	49	152 00	148 00
Sherbrooke	77	338 00	328 00
Sorel, (Catholic)	350	400 00	388 00
Sorel, (Protestant)	34	135 00	131 00
Stanbridge	60	228 00	222 00
Sutton	84	192 00	187 00
Shefford	90	304 00	340 00
Stanstead	180	542 00	526 00
St. Timothée	120	135 00	131 00
Three Rivers, (Protestant)	20	150 00	146 00
Vaudreuil	100	152 00	148 00
Yamachiche	125	228 00	222 00
Quebec Commercial and Literary Acad.	92	152 00	148 00
St. Andrews, Argenteuil	108	93 00	93 00
Roxton	50	133 00	129 00
Bedford High School	55	....	100 00
St. Hyacinthe Girouard Academy	375	....	150 00
Total			13394 00

List No. 5.—Academies for Girls.

NAME OF INSTITUTION.	Number of pupils.	Annual grant for 1863.	Annual grant for 1864.
Ste. Anne de Lapérade	166	135 00	133 00
St. Ambroise de Kildare	115	93 00	93 00
L'Assomption	178	135 00	133 00
St. Aimé	112	114 00	112 00
Baie St. Paul	93	114 00	112 00
Belœil	84	93 00	93 00
Boucherville	122	93 00	93 00
Cedars	62	93 00	93 00
Chambly	130	152 00	149 00
St. Césaire	185	127 00	125 00
Ste. Croix	75	152 00	149 00
Cowansville	40	152 00	149 00
St. Charles, Industry	316	203 00	199 00
Châteauguay	104	93 00	93 00
St. Clément	264	152 00	149 00
St. Cyprien	162	93 00	93 00
St. Denis	120	93 00	93 00
St. Elizabeth	119	203 00	199 00
St. Eustache	125	96 00	96 00
St. Grégoire	233	228 00	224 00
Ste. Geneviève	90	93 00	93 00
St. Henri de Masconche	98	93 00	93 00
St. Hilaire	70	93 00	93 00
St. Hugues	85	304 00	298 00
St. Hyacinthe, Sœurs de la Charité	320	135 00	133 00
St. Hyacinthe, Sœurs de la Présentation	209	135 00	133 00
L'Islet	70	135 00	133 00
Ile-Verte	69	133 00	131 00
St. Johns, Dorchester	449	228 00	224 00
St. Jacques de l'Achigan	189	203 00	199 00
St. Joseph de Lévis	285	304 00	298 00
Kakouna	82	169 00	166 00
Kamouraska	75	152 00	149 00
Laprairie	133	93 00	93 00
Longueuil	352	304 00	298 00
St. Lin	94	93 00	93 00
St. Laurent, Jacqnes-Cartier	131	203 00	199 00
Long Point	37	152 00	149 00
Montreal, (board for 12 Deaf & Dumb Females.)		449 00	440 00
Ste. Marie de Monnoir	148	152 00	149 00
Ste. Marie de Beauce	121	169 00	166 00
St. Martin	92	93 00	93 00
St. Michel de Bellechasse	95	228 00	224 00
St. Nicolas	57	93 00	93 00
St. Paul de l'Indnstrie	61	93 00	93 00
Pointe-Claire	79	93 00	93 00
Pointe-aux-Trembles, Hochelaga	122	203 00	199 00
Pointe-aux-Trembles, Portneuf	113	203 00	199 00
Rivière-Ouelle	80	174 00	171 00
Rimouski	102	228 00	224 00
Ste. Scholastique	130	101 00	99 00
Sherbrooke	152	304 00	298 00
Sorel	401	350 00	343 00
Ste. Thérèse	137	93 00	93 00
St. Thomas de Pierreville	70	152 00	149 00
St. Timothée	125	135 00	133 00
St. Thomas de Montmagny	182	228 00	224 00
Varennes	96	169 00	166 00
Yamachiche	116	152 00	149 00
St. Benoit	96	152 00	149 00
Three Rivers	252	228 00	224 00
Ste. Famille	69	195 00	191 00
Terrebonne	140	93 00	93 00
Trois Pistoles, No. 1	50	133 08	131 00
Vaudreuil	89	93 00	93 00
St. Denis Street Academy, Montreal	131	150 00	186 00
Berthier, (County of Berthier)	114	....	100 00
Total	....	....	10520 00

List No. 6.—Model Schools.

NAME OF INSTITUTION.	Number of pupils.	Annual grant for 1863.	Annual grant for 1864.
St. Andrew's School, Quebec	37	511 00	501 00
British and Canadian Sch. Soc., Montreal	114	676 00	663 00
Col. Church and School Soc., Sherbrooke	110	169 00	166 00
British and Canadian Sch. Soc., Quebec	192	740 00	726 00
National School, Quebec	240	375 00	368 00
Point St. Charles, Montreal	190	250 00	245 00
Society of Education, Quebec	521	946 00	927 00
" " Three Rivers	353	509 00	499 00
Free School in connection with the Ameri-	110	338 00	332 00
can Presbyterian School Soc., Montreal	1132	676 00	663 00
Lorette, Girls' school		133 00	133 00
" Boys' "		133 00	133 00
Stanfold	40	56 00	56 00
St. Francis, Indian school	25	169 00	166 00
Quebec, Lower Town, Infant school	50	169 00	166 00
Quebec, Upper Town, Infant school	80	205 00	201 00
St. Jacques, Montreal	700	845 00	828 00
To the Cath. Com. of the City of Quebec	622	338 00	332 00
Deschambeault	53	152 00	149 00
St. Constant	99	114 00	112 00
St. Jacques le Mineur	138	114 00	112 00
Point Claire	66	152 00	149 00
Lachine	235	74 00	74 00
Côte des Neiges	75	74 00	74 00
St. Antoine de Tilly	28	74 00	74 00
St. Edouard de Napierville	121	74 00	74 00
Ste. Philomène	53	74 00	74 00
St. François du Lac	107	74 00	74 00
Laprairie	42	74 00	74 00
Lacolle	67	74 00	74 00
Côteau St. Louis	116	74 00	74 00
Rivière du Loup	66	74 00	74 00
Ste. Anne de Lapérade	99	74 00	74 00
St. Romnald de Lévis, (Etch.)	201	74 00	74 00
St. Charles, St. Hyacinthe	128	74 00	74 00
St. Grégoire	56	74 00	74 00
St. Henri, Hochelaga	130	74 00	74 00
Beaumont	85	74 00	74 00
St. Andrew, Kamouraska	74	74 00	74 00
Ste. Anne des Plaines	96	74 00	74 00
St. Césaire	186	74 00	74 00
St. Joachim, Two Mountains	67	74 00	74 00
Boncherville	116	74 00	74 00
Lachine, Dissentients	68	74 00	74 00
Malbaie	118	74 00	74 00
Ste. Rose	84	74 00	74 00
St. Denis, Kamouraska	110	74 00	74 00
Chicoutimi	128	140 00	138 00
St. Sévère	73	74 00	74 00
Bury	57	74 00	74 00
Châteauguay	78	74 00	74 00
St. Hilaire	53	74 00	74 00
Ste. Seholastiqne	90	74 00	74 00
St. Joseph de Lévis	302	74 00	74 00
St. Michel Archange	128	74 00	74 00
St. Jean Deschaillons	66	74 00	74 00.
St. Gervais	30	74 00	74 00
St. Nicolas, Lévis	37	74 00	74 00
St. Isidore, Laprairie	80	74 00	74 00
St. Henri de Lauzon	60	74 00	74 00
Grande Baie	81	74 00	74 00
Sommerset	40	152 00	149 00
Ste. Geneviève de Batiscan	115	56 00	74 00
St. Valentin	92	56 00	56 00
St. Vincent de Paul	49	56 00	56 00
Ste. Martine, (boys)	128	56 00	56 00
Bécancour	165	56 00	56 00

LIST No. 6.—MODEL SCHOOLS.—(*Continued.*)

NAME OF INSTITUTION.	Number of pupils.	Annual grant for 1863.	Annual grant for 1864.
St. Hubert	55	56 00	56 00
St. Jérôme	46	56 00	56 00
Ste. Gertrude	36	74 00	74 00
St. Charles, Bellechasse, (boys)	87	74 00	74 00
St. George, Cacouna	90	56 00	56 00
Pointe-aux-Trembles, Portneuf	71	74 00	74 00
Ste. Cécile, Beauharnais	167	74 00	74 00
Eboulements	76	74 00	74 00
Prot. Model School, Panet Street, Montreal.	249	74 00	74 00
St. Laurent, Montmorency	100	74 00	74 00
Rawdon,	18	74 00	74 00
St. Gervais	55	74 00	74 00
Notre-Dame de la Victoire, Lévis	180	74 00	74 00
Rigaud, (Convent)	86	74 00	74 00
St. Vincent de Paul, (Convent)	114	74 00	74 00
Sch. of Visitation St., Queb. Sub., Montreal.	800	74 00	74 00
St. Jean, Port Joly, (girls)	15	74 00	74 00
Lacolle, Dissentients	135	74 00	74 00
Ste. Anne, No. 2, Kamouraska	64	56 00	56 00
Melbourne, (girls,)	84	74 00	74 00
German Protestant School of Montreal	55	56 00	56 00
Pointe du Lac	101	74 00	74 00
St. Edouard, Témiscouata, (girls)	108	74 00	74 00
Château-Richer	57	74 00	74 00
Lotbinière	62	74 00	74 00
Rivière-Ouelle	44	74 00	74 00
St. Narcisse	82	74 00	74 00
St. Paschal	108	74 00	74 00
Ste. Famille, Island of Orleans	56	74 00	74 00
Ste. Foye	112	74 00	74 00
St. Stanislas	97	74 00	74 00
Leeds	63	74 00	74 00
St. Henri de Mascouche	88	74 00	74 00
Ecureuils	121	56 00	56 00
St. Jean Chrysostôme, No. 2	48	56 00	56 00
Rivière-des-Prairies	25	56 00	56 00
St. Louis de Gonzague	140	56 00	56 00
St. Léon	87	56 00	56 00
St. Aimé	124	74 00	74 00
St. Patrick Cath. Sch., Point St. Chs., Mont.	105	74 00	74 00
St. John's Suburb, Quebec	81	74 00	74 00
St. Alexandre, Iberville	67	74 00	74 00
L'Acadie	123	74 00	74 00
Ste. Claire, D	96	74 00	74 00
St. Charles, Bellechasse, (girls)	104	74 00	74 00
Cap St. Ignace	92	74 00	74 00
Escoumins	57	74 00	74 00
St. Edouard, Témiscouata, (boys)	80	74 00	74 00

LIST No. 6.—MODEL SCHOOLS.—(*Continued.*)

NAME OF INSTITUTION.	Number of pupils.	Annual grant for 1863.	Annual grant for 1864.
St. Frederick, Drummond	53	74 00	74 00
Iberville	120	74 00	74 00
St. Irénée	60	74 00	74 00
St. Philippe	72	74 00	74 00
St. Calixte de Sommerset	104	74 00	74 00
St. Roch de l'Achigan	86	74 00	74 00
St. Henri, Dissentients	73	74 00	74 00
Henriville, Iberville	108	56 00	56 00
Arthabaskaville	122	56 00	56 00
St. Anselme, (Convent)	80	56 00	74 00
Carleton	76	74 00	109 00
Côteau du Lac	59	74 00	74 00
Deschambeault, (Convent)	91	56 00	74 00
St. Henri, Hochelaga, (Convent)	196	56 00	56 00
Ste. Hélène, Kamouraska	84	56 00	56 00
Inverness	35	56 00	56 00
Ste. Julie, Megantic	50	56 00	56 00
St. Lambert, Lévis	67	56 00	56 00
Matane	58	56 00	56 00
Magog	40	74 00	74 00
Ste. Martine, (girls)	102	56 00	56 00
Nicolet	76	56 00	56 00
St. Placide, Two Mountains	73	74 00	74 00
Ste. Ursule	94	56 00	56 00
Sault-aux-Récollets	82	74 00	74 00
Sherrington	121	93 00	93 00
Huntingdon	63	74 00	74 00
Henryville, (Convent)	144	56 00	56 00
West Shefford	46	75 00	75 00
St. Romuald de Lévis, (girls)	114	....	74 00
West Farnham	21	....	56 00
West Brome	33	....	56 00
Berthier, B., Dissentients	35	....	56 00
Côteau Landing, (girls)	66	....	56 90
St. Stanislas	80	....	56 00
Château-Richer, (girls)	74	....	56 00
St. Anicet	101	....	56 00
St. Jean-Baptiste Village	284	....	74 00
St. Janvier	56	....	56 00
Ste. Anne, Kamouraska	140	....	74 00
St. Denis, (Richelieu)	62	....	74 00
St. Sulpice	92	56 00	56 00
St. Pierre les Becquets	56	....	56 00
Total	....	....	17237 00

APPORTIONMENT OF THE SUPPLEMENTARY GRANT TO POOR MUNICIPALITIES FOR 1864.

COUNTIES.	MUNICIPALITIES.	Reasons for granting supplementary aid, and determining the amount thereof.	Amount of the usual annual grant.		Amount of assessment levied.		Amount of Supplementary aid applied for.		Supplementary aid granted.	
			$	c.	$	c.	$	c.	$	c.
Argenteuil	Mille-Isles	New settlement and poor	63	54	234	00	40	00	26	00
“	Township of Morin	“ “ 1 schoolhouse built	51	32	200	00	40	00	26	00
“	Gore & Wentworth	“ “ “ “	128	42	212	00	40	00	26	00
“	Chatham, No. 1 (*Dissts.*)	Population small and maintaing 2 schools	41	00	91	93	40	00	26	00
Arthabaska	Ste Eulalie	New settlemeut and poor	12	22	88	00	80	00	26	00
“	St. Léonard	“ “ 1 schoolhouse built ($100)	29	50	83	00	80	00	26	..
“	Chester (West)	“ “ 2 “ “ ($180)	84	90	324	00	60	00	26	00
“	Chester (East)	“ “ 1 “ “ ($ 90)	88	98	198	00	60	00	26	00
“	Ste. Clotilde	“ “ 1 “ “ ($ 94)	21	36	98	11	40	00	26	00
“	St. Valère	“	57	26	112	00	80	00	26	00
“	Warwick	“ “ 1 “ “ ($140)	150	46	619	68	60	00	16	00
“	“ (*Dissentients*)	“ “ 2 “ “ ($295)	....	..	94	45	125	00	16	00
“	St. Venceslas	“ “ 2 “ “ ($200)	13	78	72	00	80	00	26	00
“	St. Norbert	“	139	30	140	00	40	00	26	00
“	Victoriaville	“ “ 2 schoolhouses about to be built	110	96	300	00	80	00	26	00
“	St. Christophe	“ “ 2 schoolhouses built ($200)	167	26	180	00	80	00	26	00
“	Chénier	New municipality	....	..	....	..	80	00	26	00
“	Tingwick	A considerable debt to be paid off	....	..	....	..	....	..	26	00
Bonaventure	Matapédiac	Poor settlement and maintaining 2 schools	35	04	137	00	40	00	26	00
“	Hope	“ “ “ }	98	68	184	00	60	00	16	00
“	“ (*Dissentients*)	“ “ several schoolhouses built ($500) }			60	00	60	00	16	00
“	Nouvel	“ “ schoolhouses repaired, involving outlay of $80.	84	18	200	00	40	00	20	00
“	Ristigouche	“ “ maintaing 2 schools	58	90	108	00	50	00	20	00
“	Rustico	“ “ “ 2 “	43	06	....	..	40	00	26	00
“	New-Richmond	“ “ “ 2 “ }	170	70	185	00	40	00	16	00
“	“ “ (*Dissts.*)	“ “ “ 2 “ }			124	00	40	00	16	00
“	Carleton	“ “ “ 2 “	108	30	456	00	40	00	26	00
“	Maria	“ “ “ 4 schools, and schoolhouse about to be built ($250)	206	10	290	00	60	00	20	00
“	Shoolbred	Poor settlement and maintaining 2 schools	92	30	190	00	40	00	26	00
“	Port-Daniel	“ “ “ 2 “	130	58	180	00	80	00	26	00
“	Ristigouche (*Indians*)	Inhabitants too poor to pay a contribution	50	00	....		80	00	40	00
Beauce	Aylmer	New settlement maintaining 4 schools	97	78	223	00	50	00	26	00
“	St. Fréderic	“ “ “ 5 “	169	58	232	00	60	00	26	00
“	Forsyth	“ “	76	54	110	00	40	00	16	00
“	St. Ephrem	“ “ “ 3 “	104	02	215	00	40	00	26	00
“	St. Victor	“ “ “ 4 “ 1 schoolhouse built ($460)	130	78	348	00	40	00	26	00
“	Lambton	“ “ “ 2 “	99	48	188	00	40	00	26	00
“	Metgermette	“ “	66	36	80	00	40	00	26	00
“	Aubert-Gallion	“ “ “ 6 “	200	10	315	84	40	00	26	00
Bellechasse	Armagh	Poor municipality, recently established	73	26	74	00	50	00	16	00
Bagot	St. André	Population increased rapidly and maintaining 7 schools	194	00	2139	00	80	00	26	00
Brome	Bolton, (*Dissentients*)	Inhabitants poor and supporting 2 schools	45	00	169	64	80	00	26	00
Chicoutimi	Laterrière	Poor municipality maintaining 3 schools	96	26	300	00	40	00	26	00
“	St. Jean	“ “	39	34	60	00	40	00	26	00
“	St. Joseph	“ “	69	04	227	55	40	00	26	00
“	Ouiatchouan	New and poor settlement	45	58	100	00	40	00	26	00
“	Grande-Baie	“ “	154	86	418	45	100	00	26	00
“	Chicoutimi, (Village)	“ “ 1 schoolhouse built ($1600)	90	66	288	00	200	00	26	00
“	Bagotville	“ “ maintaining 5 schools	148	80	480	00	40	00	26	00
“	Bagotville (Village)	“ “	48	62	111	00	40	00	26	00
“	Hébertville	“ “ maintaining 2 schools	104	46	112	00	60	00	26	00
Champlain	St. Maurice (*Dissentients*)	Few inhabitants	13	00	67	00	40	00	16	00
“	St. Tite	New municipality in operation since July	....	..	....	..	40	00	26	00
“	St. Narcisse	“ “ poor	110	66	180	00	60	00	26	00
“	Forges-Radnor	“ “ “	46	00	71	25	50	00	26	00
“	N.-D. de Montcarmel	“ “ maintaining 3 schools	55	62	172	00	60	00	26	00
Compton	Winslow (North)	“ “ “ 3 “	80	62	196	00	40	00	26	00
“	Winslow (South)	“ “ “ 5 “	102	18	205	00	40	00	26	00
“	Clifton	“ “ “ 5 “ 1 schoolhouse b. ($150)	61	50	160	00	40	00	26	00
“	Newport & Auckland	“ “	45	56	304	00	60	00	26	00
“	Lingwick	“ “ “ 4 “	63	76	380	00	60	00	26	00
“	Hereford	“ “ “ 7 “	41	38	260	00	45	00	26	00
Charlevoix	Settrington	“ “	61	04	20	00	40	00	26	00
“	Isle-aux-Coudres	Revenue small and maintaining 4 “ schoolhouses built ($304)	79	14	158	00	40	00	26	00
“	St. Irénée	Means very limited, maintaining 3 schools	112	82	240	00	50	00	26	00
“	St. Urbain	“ “ “ 2 “	66	02	143	50	40	00	26	00
“	St. Agnès	“ “ “ 4 “ sch. repaired ($140)	149	68	308	00	50	00	26	00
“	Petite-Rivière	Poor municipality and few inhabitants	82	30	91	00	80	00	12	00
“	St. Fidèle	“ “ maintaining 3 sch. Schoolhouses repaired ($80)	94	52	180	00	30	00	26	00
“	De Sales	New and poor settlement 1 schoolhouse built	45	00	30	00	40	00	26	00

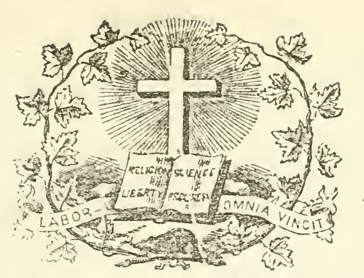
APPORTIONMENT OF THE SUPPLEMENTARY GRANT TO POOR MUNICIPALITIES FOR 1864.—(*Continued.*)

COUNTIES.	MUNICIPALITIES.	Reasons for granting supplementary aid, and determining the amount thereof.	Amount of the usual annual grant.		Amount of assessment levied.		Amount of supplementary aid applied for		Supplementary aid granted.	
			$	c.	$	c.	$	c.	$	c.
Charlevoix	St. Placide	New and poor settlement. 2 schoolhouses built	50	74	120	00	40	00	26	00
Châteauguay	Ormstown, (*Dissentients*)	Few inhabitants and poor	25	00	69	00	160	00	20	00
Dorchester	Standon	New settlement and population small	48	50	70	00	30	00	20	00
Drummond	St. Germain	Poor municipality supporting 5 schools. 1 sch.house built ($145)	177	84	399	00	45	00	26	00
"	Grantham	Small and thinly settled munic. heavily assessed to pay off debts	143	58	279	65	80	00	80	00
"	Wickham	Revenue small and supporting 3 sch. 1 schoolhouse built ($100.)	71	04	354	00	50	00	26	00
"	Durham, No. 1	Population scattered and supporting 12 schools	183	34	387	56	80	00	26	00
"	St. Pierre	" " 11 "	198	40	866	38	40	00	26	00
"	St. Bonaventure	" " 3 "	105	24	147	00	80	00	26	00
"	Wendover	New and poor municipality	53	74	100	16	80	00	26	00
Gaspé	Newport	" " "	46	90	114	00	80	00	26	00
"	Pabos	" " " 2 schoolhouses built	42	72	288	00	80	00	26	00
"	Grande-Rivière	Means restricted and maintaining good schools. Building erected for a Model school	149	00	400	00	80	00	26	00
"	Percé	Poor and heavily taxed to maintain good schools	169	4	600	00	80	00	26	00
"	Cap-Désespoir	" " " "	131	34	300	00	80	00	26	00
"	Isle-Bonaventure	Ratepayers poor and not numerous	30	00	40	00	40	00	12	00
"	York & Haldimand	Population small and heavily burthened	32	34	150	00	40	00	26	00
"	Cap-des-Rosiers	" " " "	39	94	100	00	60	00	26	00
"	Anse-à-Grisfonds	" " " "	100	84	180	00	40	00	26	00
Hochelaga	Coteau St. Louis, (*Dissts.*)	" " " "	30	00	260	00	40	00	12	00
Huntingdon	Huntingdon, (*Dissts.*)	Poor muuicipality, maintaining 2 good schools	20	00	160	00	40	00	26	00
"	Hemmingford	" " 3 schools	100	00	132	00	40	00	26	00
L'Islet	St. Hubert	" " 5 "	149	86	225	00	40	00	26	00
"	St. Cyrille	" " 2 "	73	70	141	00	80	00	26	00
Joliette	St. Ambroise, (*Dissts.*)	Few inhabitants	30	00	100	00	40	00	16	00
"	Ste. Mélanie	Inhabitants poor and maintaining 5 good schools	158	60	496	00	40	00	26	00
"	St. Alphonse	" " 3 "	215	58	337	00	40	00	26	00
Kamouraska	Mont-Carmel	Poor settlement with few inhabitants and maintaining 2 schools	67	60	94	95	40	00	26	00
" (*Dissts.*)	Ste. Hélène	Ratepayers poor and supporting 5 schools	143	58	200	50	80	00	26	00
"	St. Onésime	" crops destroyed by fire	88	60	88	00	40	00	26	00
"	St. Alexandre	" maintaining 5 schools	196	14	256	60	80	00	26	00
Lotbinière	St. Flavien	" " Building 1 schoolhouse	115	88	218	00	50	00	26	00
"	St. Gilles	" " 2 schools	97	30	37	00	40	00	26	00
"	St. Agapit	Very poor municipality	38	70	38	30	25	00	16	00
Lévis	St. Lambert	Ratepayers poor and supporting 6 good schools	186	08	234	70	40	00	26	00
"	Etchemin, (Village)	Maintaining two superior schools	90	66	272	00	40	00	30	00
Megantic	Inverness (*Dissts.*)	Means restricted and maintaining 2 schools	40	92	90	00	40	00	16	00
"	Ste. Julie	" " 2 "	158	04	350	00	40	00	26	00
Montmagny	Isle-aux-Grues	" " 2 "	68	28	100	73	40	00	18	00
"	Grosse-Isle	Population very small	4	18	60	00	40	00	40	00
Montmorency	Laval	" " Inhabitants poor and not numerous	42	98	80	00	40	00	20	00
"	St. Ferréol	" " 1 schoolhouse built ($400)	98	50	98	00	40	00	16	00
Maskinongé	St. Didace	" " maintaining 4 schools	159	62	202	00	120	00	26	00
"	Peterborough	New and poor settlement	48	16	60	00	40	00	16	00
"	St. Paulin	New parish maintaining 3 schools	120	40	207	00	40	00	26	00
Montcalm	Kilkenny	" " 3 " $352 levied to build a schoolh.	170	84	198	00	120	00	26	00
"	St. Liguori	Poor municipality " 4 "	172	18	400	36	80	00	26	00
Nicolet	Ste. Gertrude	" " 5 "	160	64	249	00	60	00	26	00
Ottawa	Lowe	New settlement with a small population supporting 2 schools	92	92	135	52	40	00	26	00
"	Wakefield	" " 1 schoolhouse built	55	62	60	02	40	00	26	00
"	Hartwell	" " "	32	78	230	00	40	00	26	00
"	St. André Avelin	Ratepayers poor and supporting 4 schools " ($100)	172	30	413	00	40	00	26	00
Pontiac	Calumet	Poor municipality supporting 3 schools	118	70	393	25	80	00	26	00
Quebec	St. Dunstan, (*Dissts.*)	Population small and poor	28	54	72	00	25	00	20	00
"	St. Dunstan	" "	28	54	80	00	40	00	20	00
Rimouski	Métis	Poor municipality maintaining 3 schools	57	08	124	00	40	00	26	00
" (*Dissts.*)	St. Fabien	Poor municipality maintaing 5 schools	139	46	193	00	30	00	26	00
"	St. Simon	" " 7 "	136	46	358	24	48	00	26	00
"	McNider	" " 3 "	137	62	140	15	40	00	26	00
Richmond	Cleveland, (*Dissts.*)	Inhabitants poor and supporting 2 schools. 1 schoolhouse built.	35	26	53	00	40	00	20	00
"	Shipton (*Dissts.*)	" "	11	00	150	00	20	00	20	00
"	Windsor	" " 5	70	10	323	00	40	00	26	00
Saguenay	Escoumains	Very poor settlement	116	34	101	00	40	00	20	00
"	Tadoussac	" " Building a schoolhouse	51	78	80	25	50	00	26	00
Shefford	Granby, (*Dissts.*)	Inhabitants poor and supporting 7 schools	131	40	231	00	150	00	40	00
St. Maurice	Shaouinigan	New settlement maintaining 4 schools. 1 schoolhouse built	114	18	286	00	60	00	26	00
"	St. Sévère	Means restricted; " 4 "	105	82	176	00	80	00	26	00
Stanstead	Hatley, (*Dissentients*)	Population poor and scattered, maintaining 2 schools	....	..	130	00	40	00	20	00
"	Barford	" " " 6 "	79	14	300	00	50	00	26	00
St. Jean	L'Acadie, (*Dissentients*)	Population small and scattered	28	00	68	00	80	00	20	00

APPORTIONMENT OF THE SUPPLEMENTARY GRANT TO POOR MUNICIPALITIES FOR 1864.—(*Continued.*)

COUNTIES.	MUNICIPALITIES.	Reasons for granting supplementary aid, and determining the amount thereof.	Amount of the usual annual grant.		Amount of assessment levied.		Amount of supplementary aid applied for.		Supplementary aid granted.	
			$	c.	$	c.	$	c.	$	c.
Témiscouata	St. Antonin	Poor municipality maintaining 3 schools	100	72	264	00	40	00	26	00
"	St. Eloi	" " 6 "	157	92	193	52	40	00	26	00
"	St. Modeste	New and poor settlement. 1 schoolhouse built	70	10	120	00	50	00	26	00
Terrebonne	Abercrombie	" "	55	96	55	96	30	00	26	00
"	Ste. Agathe de Beresford	" "	42	96	50	00	40	00	26	00
Two Mountains	St. Canut, No. 1	Means restricted and more schools wanted	50	34	132	00	50	00	20	00
Wolfe	Weedon	New municipality maintaining 4 schools. 1 schoolhouse built	91	46	460	00	40	00	26	00
"	Weedon, (*Dissentients*)	" " 1 " 1 " repaired.	....	..	50	00	30	00	16	00
"	Ham (North)	" 6 " built.	68	96	427	00	40	00	26	00
"	Wotton	" " 7 "	173	32	376	94	50	00	26	00
"	St. Gabriel de Stratford	" " 2 "	46	70	188	00	40	00	26	00
"	St. Camille	" " 4 "	54	94	100	00	40	00	26	00
"	Garthby	Population small and very poor	31	08	76	00	40	00	26	00
Yamaska	St. Zéphirin	Maintaining 6 schools one of which is a Model school.	144	38	271	46	40	00	26	00
"	Ste. Brigitte	Newly established municipality and poor	....	..	....	..	40	00	40	00
Champlain	Batiscan	Inhabitants poor and supporting 4 schools	....	..	....	..	26	..	....	00
		Total							3886	00

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LITERATURE.

POETRY.

THE EASTER DAYBREAK.

No echo wakes the earth's dim muffled sleep.
The pall of death hangs o'er the sombrous deep.
The night's archangel folds her silvery wings,
As if withdrawn from slumber wearied things.
Unbroken cloud without one gush of white
Is gathered round the spirit of the light,
No odorous wind or wave crest floateth by
Beneath the "Passion" 's anguish darkened sky.
The lids of Heaven seal up the stars in gloom
And silence watcheth by the Saviour's tomb.

....

A thrilling breath has stirred the languid air
Like the voice ripplings of far blended prayer,
A balmy fragrance on its murmur passed,
When glittering raiment on the ground was cast.

....

The dazzling snow tints of the April cloud
Gleam o'er the radiance of a fallen shroud.

....

The sister stars shine on the Orient skies.
The incense bearers of the dawn arise.
The wind's first murmur to the ear hath borne
The Alleluia of the Easter morn.
And echo wafts upon its hallowed breath
A psalm uplifted from the gates of death.
The earliest anthem of the flowing wave
A virgin triumph from the opened grave.
Then emblem of eternity bears now
The crown of light round his flame wreathing brow.
The ransomed earth rings out her Sabbath lay,
In joyous chimes to greet the Easter Day.
The Cherub Choir in Heaven's Cathedral sing
Their glorious welcome to the Easter King.

M. ETHELIND KITTSON.

(*Gazette de Sorel.*)

SCIENCE.

Leaves from Gosse's Romance of Natural History.

(*Continued.*)

MULTUM E PARVO.

Nor is Europe wholly free from such plagues. There is, in Servia and the Banat, a minute fly, from whose destructive assaults on the cattle the inhabitants have suffered immense losses. A traveller, arriving at Golubacs, on the Danube, thus speaks of it:—

"Near this place we found a range of caverns, famous for producing the poisonous fly, too well known in Servia and Hungary under the name of the Golubacser fly. These singular and venomous insects, somewhat resembling musquitoes, generally make their appearance during the first great heat of the summer, in such numbers as to appear like vast volumes of smoke. Their attacks are always directed against every description of quadruped, and so potent is the poison they communicate, that even an ox is unable to withstand its influence, for he always expires in less than two hours. This results, not so much from the virulence of the poison, as that every vulnerable part is simultaneously covered with these most destructive insects; when the wretched animals, frenzied with pain, rush wild through the fields till death puts a period to their sufferings, or they accelerate dissolution by plunging headlong into the rivers."

Perhaps worse, however, than these, or any of them, are the musquitoes; not that their virulence or fatality equals that of the tsetsæ or zimb, but because they are almost universally distributed. Those, terrible as they are, are limited to certain districts, but the musquito is ubiquitous, and everywhere is a pest and a torment. One needs to spend a night among musquitoes to understand what a true plague of flies is. Hundreds of travellers might be cited on the subject, and if I adduce the following testimony, it is not because it is the strongest I could find, but because it is one of the most recent, and therefore least known:—

That traveller of all travellers, Mr. Atkinson, who has laid open to us the most magnificent scenery of the world, and the most inaccessible, to whom neither the most fearful chasms and precipices, nor boiling torrents and swift rivers, nor earthquakes and furious storms,

nor eternal frost and snow, nor burning waterless steppes, nor robbers, nor wild beasts, presented any impediment,—fairly confesses his conqueror in the musquito. The gnat alone, of all creatures, elicits from him a word of dread;—he could not brave the musquitoes. Over and over he tells us in his mountain scrambles, that the musquitoes were there "in millions,"—that they were "taking a most savage revenge on him for having sent his horses out of their reach," —that they were "devouring" him,—that he "neither dared to sleep nor to look out;"—that "the humming sound of the millions was something awful;"—that he found himself "in the very regions of torment," which "it was utterly impossible to endure;"—that "the poor horses stood with their heads in the smoke, as a protection against the pests;"—and that "to have remained on the spot would have subjected them to a degree of torment neither man nor beast could endure, so that they were obliged to retreat." "I wish I could say," he feelingly adds, "that we left the enemy in possession of the field. Not so; they pursued us with blood-thirsty pertinacity, until we reached some open meadows, when they were driven back into their fenny region by a breeze,—I hope to prey on each other."

THE VAST.

Though great and small must always be comparative terms, the human mind does ordinarily set up some standard of dimensions, for this or that particular class of entities, and is affected with emotions of surprise and admiration, in proportion as some examples either exceed or fall short of it. In living creatures, probably, the human body is the tacitly recognised medium of size; for we call a horse or a buffalo a large animal, a cat or a weasel a small one; while, in such as pass beyond these limits in either direction, we are conscious that the dimension becomes a prominent element in the interest with which we regard them. The first exclamation of one who sees an elephant for the first time, would probably be, "How big he is!" and in like manner the first impression produced by a humming-bird, in most cases, would not be "How beautiful! How glittering!" but "How very small!"

I well remember the interest and almost awe with which, on my first voyage across the Atlantic, I saw suddenly emerge from the sea, the immense black oily back of a whale. It was almost close to the ship, and it rose like a great smooth bank out of the water, gave a sort of wallowing roll, and quietly sank from sight again. The excitement of the momentary sight prevented my attempting to estimate its measurement, besides that the entire animal was not exposed, but it seemed to me nearly as large as the vessel in which I sailed. The species was no doubt the great rorqual, since the whalebone whale is said never to venture beyond the limits of the Arctic Seas. This is the most enormous of all the animals known to inhabit this globe, attaining a length of a hundred feet and even more. The skeleton of one which was stranded near Ostend in 1827, which was subsequently exhibited in Paris and London, measured ninety-five feet. Two specimens have been measured of the length of a hundred and five feet, and Sir Arthur de Capel Brooke asserts that it is occasionally seen of the enormous dimensions of one hundred and twenty feet. (1)

The "right" or whalebone whale, the object of commercial enterprise in the Polar Seas, is little more than half as large as this last-named bulk. Eighty and a hundred feet are mentioned, indeed, by the earlier writers, as occasional dimensions of this species, but these statements are possibly exaggerations, or else the distinction between this and the rorqual may have been overlooked. A tradition exists of one Ochter, a Norwegian, of King Alfred's day, who "was one of six that had killed sixty whales in two days, of which some were forty-eight, some fifty yards long." The discrimination here would seem to imply actual measurement, though perhaps it was not very precise. At present, nothing like such a length is attained. The late Dr. Scoresby, who was personally engaged in the capture of three hundred and twenty-two whales, never found one of this species that exceeded sixty feet. There is, however, one caveat needful to be remembered; that an animal naturally long-lived, and which probably grows throughout life, is not likely to attain anything like its full dimensions when incessantly persecuted as the whale of the Arctic Seas has been for ages past. However, a whale of sixty feet is estimated to weigh seventy tons, or more than three hundred fat oxen.

The sperm-whale or cachalot, whose home is the vast Pacific, from north to south and from east to west, holds a place as to bulk between the whalebone whale and the rorqual. Mr. Beale, who is the authority in all that concerns this animal, gives eighty-four feet as the length of a sperm-whale of the largest size, and its diameter twelve or fourteen feet. Of this huge mass, the head occupies about one third of the entire length, with a thickness little inferior to that of the body; while, as this thickness is equal throughout, the front of the head terminating abruptly, as if an immense solid block had been sawn off, this part of the animal bears no small resemblance to an immense box. The appearance of a whale when disturbed, and going what seamen call "head-out," this vast bluff head projected every few seconds out of water, has a most extraordinary appearance.

Undoubtedly the largest of terrestrial animals is the elephant,

> "The huge earth-shaking beast;
> The beast on whom the castle
> With all its guards doth stand;
> The beast that hath between his eyes
> The serpent for a hand."

But the specimens with which we are familiar in our zoological gardens and menageries, are inadequate representatives of the race. It is in their native regions, of course, that we look for the most magnificent specimens. Some exaggeration, however, has prevailed respecting the dimensions attainable by the elephant. "Seventeen to twenty feet" have been given as its occasional height in the Madras presidency. The Emperor Baber, in his Memoirs, alludes to the report that in the islands the elephants attain ten gez, or about twenty feet; but he adds, "I have never seen one above four or five gez," (eight or ten feet.) The East India Company's standard was seven feet and upwards, measured at the shoulder. Mr. Corse says the greatest height ever measured by him was ten feet six inches. As an example of the deceptiveness of a mere conjecture even by experienced persons, he mentions the case of an elephant belonging to the Nabob of Decca, which was said to be fourteen feet high. Mr. Corse wished to measure particularly, as he himself judged him to be twelve feet. The driver assured him that the beast was from fifteen to eighteen feet;—yet when carefully measured, he did not exceed ten feet. The Ceylon specimens rarely exceed nine feet; yet Wolf says, he saw one taken near Jaffna, which measured twelve feet one inch, of course to the arch of the back.

The elephants of the farther peninsula much excel those of India and Ceylon, perhaps because they are less disturbed. The skeleton of one in the museum at St. Petersburg, which was sent to Peter the Great by the Shah of Persia, measures sixteen feet and a half in height; and probably this is the highest authentic instance on record.

The African elephant is perhaps not inferior to that of Pegu. Mr. Pringle, in a very graphic picture, has described an unexpected rencontre with an enormous elephant in an African valley. "We halted, and surveyed him for a few minutes in silent admiration and astonishment. He was, indeed, a mighty and magnificent creature. The two engineer officers, who were familiar with the appearance of the elephant in his wild state, agreed that the animal before us was at least fourteen feet in height." Major Denham in his expedition into Central Africa, met with some which he guessed to be sixteen feet high; but one which he saw killed, and which he characterises as "an immense fellow," measured twelve feet six to the back. (1) Fossil remains of an elephant have been discovered at Jubbalpore, which measure fifteen feet to the shoulder.

I need only advert to other colossal quadrupeds, the seven or eight species of rhinoceros, the hippopotamus, the giraffe, the camel, the gaur, the gayall, and other great wild oxen of India; the urus, the bison, the Cape buffalo, the eland. Most of these dwell in the poor and arid regions of South Africa; where the nakedness of the country permits them to be seen to advantage. Dr. Andrew Smith, in one day's march with the bullock-waggons saw, without wandering to any great distance on either side, between one hundred and one hundred and fifty rhinoceroses, which belonged to three species; the same day he saw several herds of giraffes, amounting together to nearly a hundred; and, though no elephants were observed, yet they are found in this district. At the distance of little more than an hour's march from their place of encampment on the previous night, his party actually killed at one spot eight hippopotamuses, and saw many more. In this same river there were likewise crocodiles.

Among birds, the condor of the Andes has been the subject of greatly exaggerated reports of its dimensions. When it was first discovered by the Spanish conquerors of America, it was compared to the Rokh of Arabian fable, and by some even considered to be the

(1) The gigantic whales that inhabit the Indian Ocean are probably of this genus. One was stranded on the Chittagong coast in August 1842, which measured ninety feet in length and forty-two in diameter; and another on the coast of Aracan in 1851, which was eighty-four feet long. (See *Zoologist for December* 1859, p. 6778.)

(2) Sir E. Tennent, (*Ceylon*, ii., p. 291,) quoting this account, says "nine feet six inches;" but this is a mis-reading. It was nine feet six inches *to the hip-bone*; and three feet more to the back.

identical bird, "which is able to trusse an elephant." Garcilasso states that some of those killed by the Spaniards measured fifteen *or* sixteen feet (the vagueness of the "or" in what professes to be actual measurement is suspicious) from tip to tip of the extended wings. He adds that two will attack a bull and devour it, and that single individuals will slay boys of twelve years old.

Desmarchais improves upon this; stretches the expansion of the wings to eighteen feet; a width so enormous that, as he says, the bird can never enter the forest; and he declares that a single one will attack a man, and carry off a stag.

A modern traveller, however, soars far beyond these puny flights of imagination, and gravely gives forty feet as the measurement, carefully noted, as he informs us, "with his own hand," from the actual specimen. It is only charitable to conclude that he really measured sixteen *feet*, and that he either wrote "spaces" by mistake, or, which is most likely, wrote simply "16," translating it afterwards when he compared his notes with what others had said before him. Here, however, is the veracious description, which the reader will see does not lack romance in its embellishment.

"It was so satiated with its repast on the carcass of a horse, as to suffer me to approach within pistol-shot before it extended its enormous wings to take flight, which was to me the signal to fire; and having loaded with an ample charge of pellets, my aim proved effectual and fatal. What a formidable monster did I behold, screaming and flapping in the last convulsive struggle of life! It may be difficult to believe that the most gigantic animal which inhabits the earth or the ocean, can be equalled in size by a tenant of the air; and those persons who have never seen a larger bird than our mountain eagle, will probably read with astonishment of a species of that same bird, in the southern hemisphere, being so large and strong as to seize an ox with its talons, and to lift it into the air, whence it lets it fall to the ground, in order to kill it and prey upon the carcass. But this astonishment must, in a great measure, subside when the dimensions of the bird are taken into consideration, and which, incredible as they may appear, I now insert from a note taken by my own hand. When the wings are spread they measure sixteen spaces, forty feet in extent from point to point. The feathers are eight spaces, twenty feet in length, and the quill part, two palms, eight feet in circumference. It is said to have strength enough to carry off a living rhinoceros."

Humboldt dissipated these extravagances; though he confesses that it appeared to himself of colossal size, and it was only the actual admeasurement of a dead specimen that corrected the optical illusion. He met with no example that exceeded nine feet, and he was assured by many of the inhabitants of Quito that they had never shot any that exceeded eleven. This estimate, however, appears to be below the reality; for Tschudi, a most careful and reliable authority, and an accomplished zoologist, assigns to this bird in one place an expanse of "from twelve to thirteen feet," while in another he says: "I measured a very large male condor, and the width from the tip of one wing to the tip of the other was fourteen English feet and two inches, an enormous expanse of wing, not equalled by any other bird except the white albatross." So far from his "trussing a rhinoceros," or even an ox, he cannot, according to Tschudi, raise even a sheep from the ground. "He cannot, when flying, carry a weight exceeding eight or ten pounds." The voracity of the obscene bird is very great. The owner of some captive specimens assured the naturalist that he had given to one, in the course of a single day, by way of experiment eighteen pounds of meat, consisting of the entrails of oxen; that the bird devoured the whole, and ate his allowance the next day with the usual appetite.

We have all been accustomed from childhood to regard with awe the enormous serpents of the hot damp intertropical forests; though the specimens carried about in travelling menageries have but little contributed to nurture the sentiment. A couple of coils of variegated mosaic, looking like a tesselated pavement, about as thick as a lacquey's calf, wrapped up in the folds of a blanket at the bottom of a deal box, we had difficulty in accepting as the impersonation of the demon which hung from the branches of an Indian tree, and, having pressed the life out of a buffalo in his mighty folds and broken his bones, swallowed the body entire, all but the horns. Here again there is incertitude and disappointment; and the colossal dragon, which looms so large in the distance of time and space, grows "small by degrees and beautifully less" in the ratio of its approach to our own times and our own eyes. Yet enough of size and power remains, even when all legitimate deductions are made, to invest the great boa with a romantic interest, and to make the inquiry into its real dimensions worthy of prosecution.

I may observe, that several species of these great serpents exist in the intertropical regions of America, Africa, and Asia; but all these, though assigned by zoologists to distinct genera (the American species belonging to the genus *Boa*, and those of Africa and Asia to *Python*) have so much in common, in habits, structure, and size, that I shall speak of them without distinguishing the species.

The old Roman historians report that the army of Attilius Regulus, while attacking Carthage, was assaulted by an enormous serpent, which was destroyed only by the aid of the military engines crushing it with huge stones. The skin of this monster, measuring 120 feet in length, was sent to Rome, and preserved as a trophy in a temple till the Numantine war. Several writers mention the fact, and Pliny speaks of its existence as well known.

Diodorus Siculus mentions a serpent which was captured, not without loss of human life, in Egypt, and which was taken to Alexandria; it measured thirty cubits, or about forty-five feet in length.

Suetonius records that one was exhibited in front of the Comitium at Rome, which was fifty cubits, or seventy-five feet in length.

It is probable that these measurements were all taken from the skin after having been detached from the body. I have had some experience in skinning serpents, and am therefore aware of the extent to which the skin, when dragged off by force, is capable of stretching: one-fourth of the entire length may not unfairly be deducted on this account. But even with this allowance, we must admit, unless we reject the testimony of sober historians, who could hardly have been mistaken so grossly as to warrant such rejection, that serpents did exist in ancient times which far exceeded the limits that have fallen under the observation of modern naturalists.

There is a well-known picture by Daniell, representing an enormous serpent attacking a boat's crew in one of the creeks of the Ganges. It is a graphic scene, said to have been commemorative of a fact. The crew had moored their boat by the edge of the jungle, and, leaving one of the party in charge, had gone into the forest. He lay down under the thwarts, and was soon asleep. During his unconsciousness an enormous python emerged from the jungle, coiled itself round the sleeper, and was in the act of crushing him to death, when his comrades returned. They succeeded in killing the monster, "which was found to measure sixty-two feet and some inches in length." This seems precise enough; but we should like to know whether the measurement was made by the Lascars themselves, or by any trustworthy European.

A correspondent of the *Edinburgh Literary Gazette* has told, with every appearance of life-truth, a thrilling story of an encounter which he had with an enormous boa on the banks of a river in Guiana. Awaked, as he lay in his boat, by the cold touch of something at his feet, he found that the serpent's mouth was in contact with them, preparing, as he presumed, to swallow him feet foremost. In an instant he drew himself up, and, grasping his gun, discharged it full at the reptile's head, which reared into the air with a horrid hiss and terrible contortions, and then, with one stroke of his paddles, he shot up the stream beyond reach. On arriving at his friend's house, it was determined to seek the wounded serpent, and several armed negroes were added to the party.

They soon found the spot where the crushed and bloody reeds told of the recent adventure, and proceeded cautiously to reconnoitre. Advancing thus about thirty yards, alarm was given that the monster was visible. "We saw through the reeds part of its body coiled up, and part stretched out; but, from their density, the head was invisible. Disturbed, and apparently irritated, by our approach, it appeared, from its movements, about to attack us. Just as we caught a glimpse at its head we fired, both of us almost at the same moment. It fell, hissing and rolling in a variety of contortions." Here one of the negroes, taking a circuit, succeeded in hitting the creature a violent blow with a club, which stunned it, and a few more strokes decided the victory. "On measuring it, we found it to be nearly forty feet in length, and of proportional thickness."

I do not know how far this story is to be relied on; but if it is given in good faith, the serpent was the longest dependable example I know of in modern times. Still, "*nearly* forty feet" is somewhat indefinite.

In Mr. Ellis's amusing account of his visit to Manilla, he mentions specimens of enormous size; but there does not seem to have been any actual admeasurement.

"On one occasion," he says, "I was driven by an Indian, (coachman to the gentleman with whom I was stopping,) in company with a friend, to the house of a priest, who had some singularly large specimens of the boa-constrictor (*python*); one, of two that were in a wooden pen together, could hardly have been less than fifty feet long, and the stoutest part as thick round as a very fat man's body."

Bontius speaks of some which were upwards of thirty-six feet long; doubtless Oriental pythons. An American boa is mentioned by Bingley, of the same length, the skin of which was in the cabinet of the Prince of Orange; and Shaw mentions a skin in the British Museum which measured thirty-five feet. Probably in these last two cases we must allow something for stretching.

In the *Bombay Courier*, of August 31, 1799, a dreadful story is nar-

rated of a Malay sailor having been crushed to death by a python on the coast of Celebes. His comrades, hearing his shrieks, went to his assistance, but only in time to save the corpse from its living grave. They, however, killed the serpent. It had seized the poor man by the wrist, where the marks of the teeth were very distinct, and the body shewed evident signs of having been crushed by coils round the head, neck, breast, and thigh. The length of the monster was "about thirty feet, and its thickness that of a moderate-sized man."

Mr. M'Leod, in the *Voyage of H. M. S. Alceste*, has minutely described the feeding of a python from Borneo, which was sixteen feet long, and observes that, at Whydah, in Africa, he had seen serpents "*more than double* the size" of this specimen; but it does not seem that they were measured.

The *Penang Gazette* of a late date says—"A monster boa-constrictor (*python*) was killed one morning this week by the overseer of convicts at Bayam Lepas, on the road to Telo' Kumbar. His attention was attracted by the squealing of a pig, and on going to the place he found it in the coils of the snake. A few blows from the changkolf of the convicts served to despatch the reptile, and, on uncoiling him, he was found to be twenty-eight feet in length, and thirty-two inches in girth. This is one of the largest specimens we have heard of in Penang."

Dr. Andrew Smith, in his *Zoology of South Africa*, records having seen a specimen of *Python Natalensis*, which was twenty-five feet long, *though a portion of the tail was wanting*. This is the largest specimen I know of, actually measured in the flesh by a perfectly reliable authority; and even here the amount to be added to the twenty-five feet can only be conjectured.

It may be interesting to compare these statements by setting them in a tabular form, indicating each specimen by some name that shall serve to identify it, and adding a note of the degree of credit due to each.

	Feet	
Regulus	120	probably stretched.
Suetonius	75	ibid.
Diodorus	45	ibid.
Daniell	62	not reliable.
Ellis	50	conjectural.
Guiana	40	anonymous.
Bontius	36	reliable.
Bingley	36	perhaps stretched.
Shaw	35	ibid.
M'Leod	32	conjectural.
Celebes	30	vague.
Penang	28	perhaps reliable.
Smith	25	certainly correct.

Turning from the animal to the vegetable world, we find giants and colossi there which excite our wonder. There is a sea-weed, the *Nereocystis*, which grows on the north-west shores of America, which has a stem no thicker than whipcord, but upwards of three hundred feet in length, bearing at its free extremity a huge hollow bladder, shaped like a barrel, six or seven feet long, and crowned with a tuft of more than fifty forked leaves, each from thirty to forty feet in length. The vesicle, being filled with air, buoys up this immense frond, which lies stretched along the surface of the sea: here the sea-otter has his favourite lair, resting himself upon the vesicle, or hiding among the leaves, while he pursues his fishing. The cord-like stem which anchors this floating tree must be of considerable strength; and, accordingly, we find it used as a fishing-line by the natives of the coast. But great as is the length of this sea-weed, it is exceeded by the *Macrocystis*, though the leaves and air-vessels of that plant are of small dimensions. In the *Nereocystis*, the stem is unbranched; in *Macrocystis*, it branches as it approaches the surface, and afterwards divides by repeated forkings, each division bearing a leaf, until there results a floating mass of foliage, some hundreds of square yards in superficial extent. It is said that the stem of this plant is sometimes fifteen hundred feet in length.

Mr. Darwin, speaking of this colossal alga at the southern extremity of America, where it grows up from a depth of forty-five fathoms to the surface, at a very oblique angle, says, that its beds, even when of no great breadth, make excellent natural floating breakwaters. It is quite curious to mark how soon the great waves from the ocean, in passing through the straggling stems into an exposed harbour, sink in elevation, and become smooth.

Such an enormous length is not without parallel in terrestrial plants. Familiar to every one,—from the schoolboy, over whom it hangs *in terrorem*, upward,—as is the common cane, with its slenderness, its flexibility, and its finty, polished surface,—how few are aware that it is only a small part of the stem of a palm-tree, which, in its native forest, reached a length of five hundred feet! These ratans form a tribe of plants growing in the dense jungles of continental and insular India, which, though they resemble grasses or reeds in their appearance, are true trees of the palm kind. They are exceedingly slender, never increasing in thickness, though immensely in length; in the forest they trail along the ground, sending forth leaves at intervals, whose sheathing bases we may easily recognise at what we call joints, climb to the summits of trees, descend to the earth, climb and descend again, till some species attain the astonishing length of twelve hundred feet.

We are accustomed to consider the various species of *Cactus* as potted plants for our green-house shelves and cottage-windows; yet, in our larger conservatories, there are specimens which astonish us by their size. A few years ago there were at the Royal Gardens at Kew, two examples of *Echinocactus*, like water-butts for bulk; one of which weighed upwards of seven hundred pounds, and the other about two thousand pounds.

The species of *Cereus* which with us appear as green, succulent, angular stems, and bear their elegant, scarlet blossoms, adorned with a bundle of white stamens, grow, in the arid plains of South America, to thick lofty pillars or massive branching candelabra. Travellers in Cumana have spoken with enthusiasm of the grandeur of these rows of columns, when the red glow of sunset illumines them, and casts their lengthening shadows across the plain.

A kindred species in the Rocky Mountains of the northern continent has been thus described by a recent traveller:—

"This day we saw, for the first time, the giant cactus (*Cereus giganteus*); specimens of which stood at first rather widely apart, like straight pillars ranged along the sides of the valley, but, afterwards, more closely together, and in a different form—namely, that of gigantic candelabra, of six-and-thirty feet high, which had taken root among stones and in clefts of the rocks, and rose in solitary state at various points.

"This *Cereus giganteus*, the queen of the cactus tribe, is known in California and New Mexico under the name of Petahaya. The missionaries who visited the country between the Colorado and the Gila, more than a hundred years ago, speak of the fruit of the Patahaya, and of the natives of the country using it for food; and they also mention a remarkable tree that had branches, but no leaves, though it reached the height of sixty feet, and was of considerable girth. . . . The wildest and most inhospitable regions appear to be the peculiar home of this plant, and its fleshy shoots will strike root, and grow to a surprising size, in chasms in heaps of stones, where the closest examination can scarcely discover a particle of vegetable soil. Its form is various, and mostly dependent on its age; the first shape it assumes is that of an immense club standing upright in the ground, and of double the circumference of the lower part at the top. This form is very stricking, while the plant is still only from two to six feet high, but, as it grows taller, the thickness becomes more equal, and when it attains the height of twenty-five feet, it looks like a regular pillar; after this it begins to throw out its branches. These come out at first in a globular shape, but turn upward as they elongate, and then grow parallel to the trunk, and at a certain distance from it, so that a cereus with many branches looks exactly like an immense candelabrum, especially as the branches are mostly symmetrically arranged round the trunk, of which the diameter is not usually more than a foot and a half, or, in some rare instances, a foot more. They vary much in height; the highest we ever saw, at Williams' Fork, measured from thirty-six to forty feet; but, south of the Gila, they are said to reach sixty; and when you see them rising from the extreme point of a rock, where a surface of a few inches square forms their sole support, you cannot help wondering that the first storm does not tear them from their airy elevation. . . .

"If the smaller specimens of the *Cereus giganteus* that we had seen in the morning excited our astonishment, the feeling was greatly augmented, when, on our further journey, we beheld this stately plant in all its magnificence. The absence of every other vegetation enabled us to distinguish these cactus-columns from a great distance, as they stood symmetrically arranged on the heights and declivities of the mountains, to which they imparted a most peculiar aspect, though certainly not a beautiful one. Wonderful as each plant is, when regarded singly, as a grand specimen of vegetable life, these solemn, silent forms, which stand motionless, even in a hurricane, give a somewhat dreary character to the landscape. Some look like petrified giants, stretching out their arms in speechless pain, and others stand like lonely sentinels, keeping their dreary watch on the edge of precipices, and gazing into the abyss, or over into the pleasant valley of the Williams' Fork, at the flocks of birds that do not venture to rest on the thorny arms of the Petahaya; though the wasp and the gaily variegated woodpecker may be seen taking up their abode in the old wounds and scars of sickly or damaged specimens of this singular plant."

In the island of Teneriffe there still exists a tree which is an object of scientific curiousity to every visitor, the Dragon-tree of Orotava. It

has been celebrated from the discovery of the island, and even earlier, for it had been venerated by the Guanches as a sacred tree from immemorial time. Its height is about seventy feet, but its bulk is far more extraordinary. Le Dru found the circumference of the trunk, near the ground, to be seventy-nine feet. Humboldt, who, when he ascended the Peak in 1799, measured it some feet from the ground, found it forty-eight feet; and Sir G. Staunton gives thirty-six feet as the circumference at a height of ten feet.

The banyan, or sacred fig of India, acquires a prodigious size, not by the enlargement of its individual trunk, but by the multiplication of its trunks, in a peculiar manner of growth. As its horizontal limbs spread on all sides, shoots descend from them to the earth, in which they root, and become so many secondary stems, extending their own lateral branches, which in turn send down fresh rooting shoots, thus ever widening the area of this wondrous forest, composed of a single organic life. This is the tree which Milton makes afford to our guilty first parents the "fig-leaves" with which they hoped to clothe their new-found nakedness.

> " So counsell'd he, and both together went
> Into the thickest wood; there soon they chose
> The fig-tree; not that kind for fruit renown'd;
> But such as at this day, to Indians known
> In Malabar or Decan, spreads her arms,
> Branching so broad and long, that in the ground
> The bended twigs take root, and daughters grow
> About the mother-tree, a pillar'd shade
> High overarch'd, and echoing walks between:
> There oft the Indian herdsman shunning heat.
> Shelters in cool, and tends his pasturing herds
> At loopholes cut through thickest shade: those leaves
> They gather'd, broad as Amazonian targe;
> And, with what skill they had, together sew'd,
> To gird their waist." (1)

Banyans exist which are much older than the Christian era. Dr. Roxburgh mentions some whose area is more than fifteen hundred feet in circumference, and one hundred in height, the principal trunk being twenty or thirty feet to the horizontal boughs, and eight or nine feet in diameter. But the most celebrated tree of this kind is one growing on the banks of the Nerbudda, and covering an almost incredible area, of which the circumference still existing is nearly two thousand feet, though a considerable portion has been swept away by the floods of the river. The overhanging branches which have not (or had not at the time this description was made) yet thrown down their perpendicular shoots, cover a far wider space. Three hundred and twenty main trunks may be counted, while the smaller ones exceed three thousand; and each of these is constantly sending forth its branches and pendent root-shoots to form other trunks, and become the augmenters of the vast colony. Immense popular assemblies are sometimes convened beneath this patriarchal fig, and it has been known to shelter seven thousand men at one time beneath its ample shadow. (2)

The Baobab, a tree of tropical Africa, but now naturalised in other hot countries, is one which attains an immense bulk. Its growth is chiefly in the trunk. It is by no means uncommon for a bole of seventy-five or eighty feet in circumference to begin to send out its branches at twelve or fifteen feet from the ground; and the entire height is frequently little more than the circumference of the trunk. The lower branches, at first horizontal, attain a great length, and finally droop to the ground, completely hiding the trunk, and giving to the tree the appearance of a vast hillock of foliage.

Some examples of the dimensions of this immense, but soft-wooded and spongy tree, may be adduced. Adanson, in 1748, saw, at the mouth of the Senegal, baobabs which were from twenty-six to twenty-nine feet in diameter, with a heigh of little more than seventy feet, and a head of foliage a hundred and eighty feet across. He remarks, however, that other travellers had found specimens considerably larger. Peters measured trunks from twenty to twenty-five feet thick, which he says were the largest he saw. Perrottet, in his *Flora of Senegambia*, declares that he had seen some thirty-two feet in diameter, and seventy to eighty feet high. Golberry found specimens attaining thirty-six feet in diameter, yet but sixty-four feet in height. And Aloysius Cadamosto, who was the first to describe the tree, found specimens whose circumference he estimated at seventeen fathoms, which would give a diameter of thirty-four feet.

A kind of cypress, growing in Oaxaca, in Mexico, has attained great celebrity among botanists, De Candolle having stated its diameter at sixty feet. Humboldt, who speaks from personal examination, an advantage which the great botanist did not possess, reduces it to forty feet six inches—a very enormous bulk, however, still.

A recent traveller in Venezuela, thus notices a tree of remarkable dimensions:—

" Soon after leaving Turmero, we caught sight of the far-famed Zamang del Guayre, and in about an hour's time arrived at the hamlet of El Guayre, from whence it takes its name. It is supposed to be the oldest tree in the world, for so great was the reverence of the Indians for it on account of its age at the time of the Spanish Conquest, that the Government issued a degree for its protection from all injury, and it has ever since been public property. It shews no sign whatever of decay, but is as fresh and green as it was most probably a thousand years ago. The trunk of this magnificent tree is only sixty feet high, by thirty feet in circumference, so that it is not so much the enormous size of the Zamang del Guayre that constitutes its great attraction, as the wonderful spread of its magnificent branches, and the perfect dome-like shape of its head, which is so exact and regular that one could almost fancy some extinct race of giants had been exercising their topiarian art upon it. The circumference of this dome is said to be nearly six hundred feet, and the measure [arch?] of its semicircular head very nearly as great. The zamang is a species of mimosa, and what is curious and adds greatly to its beauty and softness is, that the leaves of this giant of nature are as small and delicate as those of the silver-willow, and are equally as sensitive to every passing breeze."

Even in temperate climates, among the trees with which we are familiar, vast dimensions are not unknown. A yew in the churchyard of G.asford, North Wales, measures more than fifty feet in girth below the branches. In Lithuania, lime-trees have been measured of the circumference of eighty-seven feet. And, near Saintes, in France, there is an oak, which is sixty-four feet in height, and measures nearly thirty feet in diameter close to the ground, and twenty-three feet at five feet high. A little room, twelve feet nine inches in width, has been made in the hollow of the trunk, and a semicircular bench within it has been carved out of the living wood. A window gives light to the interior, and a door closes it, while elegant ferns and lichens serve for hangings to the walls.

But let us look at examples in which prodigious height and immense bulk are united. The *Macrocystis* and the ratan are enormously lengthened, but they are slender; the baobab and the cypress are very thick, but they are short. The colossal locust-trees of equinoctial America are pre-eminent for vastness in both aspects. Von Martius has depicted a scene in a Brazilian forest, where some trees of this kind occurred of such enormous dimensions, that fifteedn Indians with outstretched arms could only just embrace one of them. At the bottom they were eighty-four feet in circumference, and sixty feet where the boles became cylindrical. "They looked more like living rocks than trees; for it was only on the pinnacle of their bare and naked bark that foliage could be dicovered, and that at such a distance from the eye that the forms of the leaves could not be made out.

(To be continued.)

EDUCATION

The Educator and his Claims.

(A lecture delivered before the Teachers' Association in connection with the McGill Normal School, by Dr. Wilkes.)

I use the term " Educator rather than Teacher," for the reason that those truly faithful ones of both sexes, to whose influence parents commit their children for several hours a day, during a period of from seven to ten years are more than teachers. They do far more than convey instruction—they greatly affect the future character. One sees *e. g.* in the pupils of such an one as the late Dr. Arnold of Rugby the moulding force exercised on the principles and character. Not only is the intellect trained in such cases, but the conscience also and the heart—large and broad views are awakened, and noble principles are implanted. Such education is more than teaching, hence we denominate its priest the educator.

Yet are there other educators besides the class represented in this Association. The pulpit educates and so does the press. The former, prior to the inauguration of the latter, was wont to be the principal source of instruction as well as of religious awakening to the people; and still it exercises a vast power in moulding the national intellect,

(1) *Paradise Lost*, book IX.

(2) Forbes' *Oriental Memoirs*.

conscience and heart. The press in our day has become a many-voiced schoolmaster, ever sending its lessons into the homes of the people: often doing great good, and alas! not infrequently doing much mischief. It undoubtedly exercises a mighty and increasing influence in the training of the community.

But the educator with whom we have now to do has a somewhat different sphere. After the child's mother, he begins at the beginning. Ere the pulpit or the press can do much for the pupil his work is well nigh completed. Hence it would be difficult to exaggerate the importance of the trust committed to him. He has to lead forth and guide the mental powers in their budding and opening processes and to furnish them with pabulum on which they may feed and grow; he has to develop the conscience into a watchful and healthy activity: he has to check, in their beginnings, all deceit, meanness, and impurity: he has to cultivate habits of industry, faithful work, truthfulness and sincerity;—he has some times to awaken and always to cherish sentiments of honour and uprightness in dealing with fellows; in fine he has to work wisely and well at the foundations of personal character. Who of us would venture to estimate the momentous interests involved in a work such as this? In the personal character of a generation of youth lies embedded the social condition of the world's people during the next age. Whether the coming generation, soon to occupy the vast arena, shall be virtuous or vicious, shall be refined and cultivated or rough and barbarous, shall be good or bad, depends largely on what is done with children at school. It is but a truism to say that men and women make the nation, and it is not much more to say that the children and youth of the present are to be the men and women of the early future, and that such future depends for its character on what our schools do in the present. In such estimate it is supposed that parental co-operation forms part of the educating power in exercise.

It is obvious that a nation's prosperity is involved in this question. The greatest difficulties with which constitutional governements have to contend, and the cause of their failure, where they do fail, is the want of high character in the people. Whenever pelf is more precious than principle, and electors or elected think more of personal interests than of the national welfare, corruption rolls in like a flood, the national conscience is debauched, and vice stalks forth unblushingly flaunting its vileness in the face of day. The true conservators of a nation's well-being are the faithful, conscientious and large hearted educators of its children and youth, for they work at the foundations and cast in the salt at the spring head.

And if the interests at stake in this matter are so momentous in the present life, what must be their magnitude when eternity is brought into view. Immortality invests the whole subject with ineffable grandeur; for these pupils will live for ever. The training of the present mightily affects that future, whether it shall be one of honour or disgrace, happiness or misery, life or death.

We may not dismiss from our present consideration the work of the educator without noting certain qualifications that seem to be more or less needful to success in this work. I do not dilate on the obvious qualification of accurate knowledge on such departments as the teacher undertakes to cultivate, for the reason that every one must at once perceive the need of this. The masculine form of the pronoun must also be understood throughout as including the feminine, for much of an effective education is conducted by women. Among the qualifications of an educator may be placed:

1st. *A true estimate of its nature and importance.*—We cannot surely expect any one to succeed in a profession like this, whose sole object is the making of money or even the obtaining of a livelihood. It is to be feared that it is not infrequently taken up as a last resort, other means of obtaining bread failing. Now, just as one would not look for great good from one who sought "the priest's office in Israel for a piece of silver or a morsel of bread," so in this case, it would be indeed surprising should merely mercenary motives achieve any worthy ends in the work of education. It is not meant to decry proper reference to such considerations in all our plans. On the contrary it is a most legitimate and honourable way of not only obtaining a livelihood, but also of laying up a competency. The labourer is worthy of his hire: and no labourer is more worthy than the educator. We delight to see them erecting their own establishments,—owning them, and becoming wealthy as far as is compatible with the claims of a large hearted benevolence.

But we object to this as *the governing motive*. That should spring out of a true estimate of the nature and importance of their work. Every young mind and heart enshrined in those bodies which occupy the seats in their establishment, is there for development and culture. No one but God can foresee the future of the being whose loving, or yearning, or merry eyes look out upon you: but you have it directly in your power to mould that future. No two boys or girls are alike. Some are sufficiently similar to admit of classification so as to afford opportunity to generalize the training process, but there will always be *differentia* to require special attention. It would be out of place to enlarge upon or to illustrate these points; their mention is all that is now appropriate. He, however, who appreciates the nature and importance of his work will study so as to know the general character and specialities of every child under his care and will conscientiously adapt his measures to each case. It is matter for gratulation that the old-fashioned *birch* or *taws* for every delinquent, without regard to characteristics of the pupil or the circumstances of his delinquency, has gone out, and is among the things that were; but discipline and punishment may not safely go out, only they must be adapted to each case needing them. A true estimate of the work to be done and of its vast importance, will awaken much thought and inquiry and will elevate at all points the character of the labourer.

2nd. *Skill and tact.*—It is quite possible, as we all know, to have treasured up stores of knowledge and yet to be ill prepared to communicate it to others. Many most scholarly men are wretched teachers; and not a few others who can communicate with facility, have no administrative ability. I am reminded of contrasts on these points supplied by classes in the University of Glasgow when I was a student. The Greek and Logic classes were presided over by Educators who were thoroughly furnished, were admirable in communication, and whose administrative ability was such that large assemblies of from ten hundred to ten hundred and fifty students were kept in perfect order. The class in mathematics on the contrary was taught by a professor, who while possessed of thoroughly accurate knowledge, failed to interest the students and equally failed to keep order. Hence it became a place of play rather than of work. It is so in schools. There are teachers who are in such sense educators that they have all under control: and the controlling power is not *dread*, but respect and love. Admitting that there are natural aptitudes in some, greater than are found in others, I cannot help thinking that much might be done in the matter of acquisition. Surely we may *learn* skill and tact. The physician does so, and especially the surgeon. One of the designs of our efficient Normal School system is to train up good workers in the department of education. There will always be certain original diversities arising partly from physical and partly from psychcological causes, but every one fitted at all for the post of an educator, may become fairly skilful. Indeed it is mainly the application to the work in all its departments of good sound common sense!

3rd. *Enthusiasm.*—It need hardly be said in this presence that obtrusiveness, fussiness, noise, bustle are not meant, but a genuine, quiet, yet deep enthusiasm. I suppose this is more or less needful to success in any business in which men and women engage; to the educator it is of vast moment. Not only does it inspire himself with the energy, the courage, the perseverance ever seriously taxed but always necessary, it also infuses the same element of power into the breasts of pupils. One has often occasion to mark the influence of this element of an educator's character upon the plastic materials upon which he has to work. Pupils are borne along, putting forth unwonted exertions to improve, animated, *they* do not know how or why, by the enthusiasm of their teacher. With all their persistent requirements, strict discipline, and determination to be obeyed, such instructors are always favourites with their young charge. The very excitement is a pleasure, and the consciousness of progress and of acquired power is ever gratifying. Wayward as youth often are, they are cheered and stimulated by the conviction that they are making advances. They do not love to stand still, they often rashly repudiate the slow, and hence real progress gladdens them. And they love the teacher who aids in this.

I suppose the enthusiasm of an educator will depend very much, not only on the intensity of his temperament, but also on the depth of his convictions regarding the nobleness and importance of his work, and on his hopefulness as to the result. The desponding cannot be energetic—the downcast knows nothing of enthusiasm. Hence it must be admitted that devout confidence in God is a wonderful stimulus in the matter of a true enthusiasm. He who works hard, believes firmly, trusts God, and feels sure of His blessing, ever cherishes the hopefulness which helps his enthusiasm in the performance of duty.

In turning now to *the claims of the Educator*, one is brought at once into contact with a state of matters much to be deplored, namely: the fact, that the popular estimate of education is altogether unequal to its real importance. This defective estimate appears both in respect to education itself and to the educator. *So far* in favour of education all the community go cheerfully; reading, writing and arithmetic are needful to getting a livelihood: but how little beyond this do many regard as useful! They who advance a step higher often grudge the time and expense of a good sound culture. Perhaps in many instances one might be satisfied with whatever can be effectively done up to fourteen or fifteen years of age, for then a large proportion of our youth must begin their apprenticeship to some chosen business: but how much is often lost for want of a thorough appreciation of the importance of

education, prior to that age. And why should not a greater number of girls have higher advantages beyond that age?

They who feel a lively interest in these things are much gladdened by the steady progress of true and enlarged views in our community. We are not a little indebted to the respected president of this society and Principal of our University for this advance; he has been indefatigable in stirring us up to thought and action.

Moreover the profession of the educator does not stand so high in public estimation as it ought. I think there is continual improvement in this particular also, but there is room still for advance; but of this more presently.

1. The first claim of the educator is *respect*.—Children, boys particularly, are prone to use unbecoming liberty with the names and any peculiarities of their teachers. Every educator has his own idiosyncracy which the young are quick to discover. If it be a matter out of which ridicule can be manufactured, that product is apt to appear. Now parents and friends should frown decidedly upon whatever interferes with true respect for the educator's person and office. It may be very witty to caricature Dominic Sampson and to utter his repeated "prodigious;" and doubtless there are peculiarities in us all on which a lively mimic may fasten for the amusement of his hearers, but such weapons are dangerous to that *respect* which ought to be entertained for the educator. And surely all parents and the friends of education should studiously discountenance whatever has a tendency to lower the influence of this profession.

Besides, the profession itself has a fair claim to a higher social standing than once obtained. This too is mending greatly; but the true point will not be reached until it is regarded as one of the learned professions. It is one of them and should be popularly so regarded. Of course its members in order to obtain their true social standing must be in character worthy of the position now claimed for them; but such qualifications existing, their elevated position should be recognized.

2. The second claim is *co-operation*.—Primarily is the educator entitled to the full co-operation of the *parents of his pupils*. This is of supreme moment. Without it he works throughout at a disadvantage. What mischief accrues from the often petulance and sad unwisdom of parents! An honest educator informs a parent of certain defects in his child which need correction. This is done simply for the child's good that there may be co-operation at home, with the work of the teacher at school. The foolish parent instead of being thankful for the honest and kind communication, cannot bear to have his child en found fault with, and becomes estranged from the teacher instead of giving to him increasing confidence. Not only is this ruinous to the pupil but most disheartening to the educator. Parental co-operation is surely a primary and most reasonable claim.

The community generally may afford their co-operation by encouraging educators. They can do much by practical sympathy—attending examinations—and aiding well considered plans. In few things are our neighbours more to be commended than in their large and liberal co-operation with the educator. They will band together and expend largely in providing suitable premises and apparatus for the effective conducting of educational movements. Throughout the United States you meet at all points with munificent proofs of the people's regard for the work of the educator. The educator has a fair claim on all this in virtue of the vast importance to the community and to the nation, of his work.

3. The third claim is *liberal and prompt remuneration*.—The liberal element must be judged of by the nature and amount of work done, but from the lowest point of education to the highest we would have a generous estimate of the educator's claims to pecuniary recompense. In few relations are grudgings and hard bargains more repulsive, or more an outrage on propriety than in this. If fees are not sufficient, the community in some form should make up the deficiency. As I have already said, pre-eminently here is the labourer worthy of his hire. And of all grudging of expense, that for the sound education of one's children, seems the most unreasonable.

And then, *punctuality and promptitude* in payment is a most reasonable claim. I know not that one could express too strongly the grievous thoughtlessness if not something worse, of those who leave the educator, after his work has been faithfully done, to seek again and again with hope deferred which maketh the heart sick, for his well earned pecuniary compensation.

4. Without enlargement I mention one other claim, namely, *to the ear of the community*.—I think our educators should have opportunities to speak to us, and that we should candidly listen to them. Our community affords sometimes the opportunity and gives the listening ear: but not with the earnestness and enthusiasm which become us. When a Teachers' Association asks an audience of us, it is only true policy as well as propriety to grant their request. Let us consider their plans and aid them in carrying them out, for they are working for the general welfare. It admits of consideration whether more might not be advantageously done throughout the rural districts as well as in the towns to bring the claims of the educator before the people, and to arouse their sympathy and aid in the great work in hand. These hints are intended more for parents and those who should be friends of the educator than for himself. Should they prove of the least service in promoting his work their utterer will be amply rewarded.

ARITHMETIC.

(*Continued.*)

I hope the two preceding examples will sufficiently show that if the dividend and divisor be both increased or diminished the same number of times, the quotient will remain unaltered, only the remainder, when any left, has to be reversely increased or decreased. But if *both* the divisor and dividend are not proportionally increased or decreased, the quotient will give a proportionate difference.

Example.

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3)24               24
  —                 2
   8 quotient.     —
                 3)47
                   —
                   16 quotient = 8 × 2 = 16
8)16            2)8
  —               -
   2 quotient.   4)16
                   —
                    4 q. = 2 × 2 = 4 quotient.
```

It would at this stage be, perhaps, out of place to dwell farther upon the properties and principles of rules. A more advanced stage, when the pupil's mind is more fully developed, and he is better able to follow up with more advantage the theory of numbers, would be more suitable for farther unfolding and illustrating the properties of numbers. But he should now be sufficiently prepared for the application of numbers to some extent. To this let us now direct some attention, beginning with reduction.

1. Make your pupils familiar with two or three of the tables of most common use; and on these let them be so exercised that they shall not only know their different divisions and the relative proportions of denominations, but be able to change one denomination into another; tell how many of one is equal to another; how many times one is more or less than another; how many two, three, &c., of one would be equal to another, or exceed it; and by how many,—giving reasons for each answer, &c. The plainest language to be used—no technical term, unless well understood.

2. When well familiarized with a table, propose very simple questions. Answer these yourself, explain how you got the answers, and the steps by which you passed from one part of the processes to the other; the point at which you commenced the operation, and why; the necessary steps taken; the succession of these steps—what step should be the first—the second—the third, &c.,—why each must have its proper place in order to bring out the required answer - and on obtaining the required result, why the answers must be correct—and how answers by different steps would not, &c. Immediately—make them explain to you in turn—with simple illustrations by themselves and by you in turn. Thus, continue the questioning and explaining reciprocally, till their answers and explanations tell that your training has effected your object, and has become to them an EFFECT OF THE UNDERSTANDING.

3. Give them then simple exercises, reducing tables to their lowest denominations. This is a very good exercise to make them understand how to change one denomination into another.

But first exercise them fully on a reduced table. No book questions should yet be given. Questions in arithmetic are not generally sufficiently plain, nor sufficiently graduated for beginners. Take the following as first step examples and illustrations for beginners:

Measure of value.

4 farthings = 1 penny, marked 1d.
12 pence = 1 shilling, " 1s.
20 shillings = 1 pound, " £1.

Reduced.

Farthings 4 = 1 penny.
Farthings 48 = 12 " = 1 shilling.
Farthings 960 = 240 pence = 20 shillings = £1.

Begin by making them repeat the names of the different denominations, thus, pounds, shillings, pence, farthings; farthings, pence, shillings, pounds, &c., &c.; and continue the repeating till the memory has got hold on them. Then exercise them on their relative values, by questioning and repeating; and make relative values, and reducing from one denomination to another be well understood. Begin explaining and questioning in the simplest conceivable way; so as to reach their understandings. The following will be found simple and effective—if so worked as to carry the child's understanding with you at each step.—First explain, by *application*, to your class, the meaning of the words you have to use, such as *worth*, *price*, *value*, &c., thus—I buy a book, a picture, or a ball, for one *penny*. To me then it is *worth* a *penny*, or *four farthings*, which are of the same *value*, by the table, as a *penny*. But if I pay *two pence* for the thing, I would have, in farthings, to pay for it *eight farthings;* if *three* pence, three *times four*, or *twelve* farthings, and so on to *twelve* pence = *forty-eight* farthings. Question them forward and backwards in this way—mixing explanations with your questions—till you are satisfied that the relative value of pence and farthings is clearly understood; how *four farthings* are *equal* in *value* to *one penny; twelve farthings* to *three pence, twenty-four farthings* to *six pence;* and *forty-eight farthings* to *twelve pence* or *one shilling*. Then, explain similarly the relative value of pence and shillings, thus, if *twelve pence* be equal in *value* to *one shilling*, then, *twenty-four pence* will be *equal* in *value* to *two shillings; thirty-six* to *three; forty-eight* to *four shillings*, &c. The relative value of shillings and pounds comes last. This is to be explained in the same manner. If a pound is equal in value to twenty shillings; then, two pounds are equal in value to forty shillings; three pounds, to sixty shillings; four pounds to eighty shillings, &c.

Before proceeding to the second step of advance, put a number of promiscuous questions to *test* their knowledge of what you have gone over. If you have succeeded to your wish, then proceed to the next step: if not, go carefully over the ground again, and give a greater variety and latitude to your explanations and examples. Succeeding well here ensures success in teaching reduction.

In the next step vary the training a little, thus,—how many farthings are equal in value to any number of pence you may mention, from one penny up to any number of pence you find they can work mentally with tolerable dexterity. Then reverse the process—how many pence are the same in value as any number of farthings you may name. Exercise them similarly on shillings and pounds. Give them then *numbers* and denominations promiscuously. This drilling will prepare them for slate exercises, such as the following:

Farthings.		Pence.	Farthings over.	Pence.		Shillings.	Pence over.
16	=	4	0	24	=	2	0
18	=	4	2	38	=	3	2
26	=	6	2	54	=	4	6
39	=	9	3	72	=	6	0
48	=	12	0	85	=	8	1

Shillings.		Pounds.	Shil. over.	Pounds.		Shil.		Pence.
30	=	1	10	8	=	160	=	1920
49	=	2	9	10	=	200	=	2400
78	=	3	18	15	=	300	=	3600
105	=	5	5	25	=	500	=	6000

Farth.		Farth.		Farth.		Farth.	Farth.		Farth.		Farth.		Pence.
28	+	36	+	19	=	83	23	+	16	+	37	=	19
32	+	17	+	28	=	77	16	+	19	+	13	=	12
40	+	25	+	36	=	101	29	+	35	+	4	=	17

Farth.		Pence.		Shil.		Farth.	Farth.		Pence.		Shil.		Pence.	
16	+	19	+	30	=	1530	23	+	16	+	5	=	81	3 farth
10	+	40	+	27	=	1466	29	+	11	+	14	=	186	1 "
14	+	35	+	16	=	922			15	+	45	=	555	0 "

Pence.		Shil.		Shil.		Shil.		Pounds.		Shil.
38	×	38	=	41	2 pence	73	+	5	=	173
45	+	105	=	108	9 "	47	+	13	=	307
72	×	200	=	206	0 "	28	+	15	=	328

Farthings.		Pence.		Shil.	Pence and farth.	
97	=	24¼	=	2	0	¼
87	=	21¾	=	1	9	¾
427	=	106¾	=	8	10	¾
342	=	85$\frac{2}{4}$	=	7	1	$\frac{2}{4}$
571	=	142¾	=	11	10	¾
684	=	171	=	14	3	
247	=	61¾	=	5	1	¾

Pence.		Shil.	d.		£.	s.	d.	Shil.		£.	Shil.
600	=	50	0	=	2	10	0	757	=	37	17
500	=	41	8	=	2	1	8	299	=	14	19
750	=	62	6	=	3	2	0	420	=	21	0
872	=	72	8	=	3	12	8	1932	=	96	12
599	=	49	11	=	2	9	11	4567	=	228	7

Such exercises as these, graduated so as to suit the capacities of your pupils, are to be continued till a clear understanding of principles and processes,—of the regular sequence of steps,—why one step of the process must precede, or succeed another,—why another would not give a correct denominational value,—and when a right result is obtained, be able to give a reason,—is GAINED BY THEM, in a short time they will acquire sufficient knowledge of the principles and sequent processes of the rule to enable them to apply them in all the higher rules.

Let us now take avoirdupois weight as a very good weight for table-training, being so generally used.

Avoirdupois weight.—16 drams = 1 ounce.
16 ounces = 1 pound. (lb.)
28 pounds = 1 quarter. (qr.)
4 quarters = 1 hundred weight. (cwt.)
20 cwt. = 1 ton.

Reduced.

Drams.
16 = 1 ounce.
756 = 16 = 1 pound.
7168 = 448 = 28 pounds = 1 quarter.
28672 = 1792 = 112 pounds = 4 quarters = hundred weight.
573740 = 35840 = 2240 pounds = 80 quarters = 20 h. w. = 1 ton.

Or thus:

1 ounce = 16 drams.
1 pound = 16 oz. = 256 drams.
1 quarter = 28 lb. = 448 ounces = 7168 drams.
1 cwt. = 4 qrs. = 112 lbs. = 1729 ounces.
1 ton = 20 cwt. = 80 qrs. = 2240 lbs. = 35840 oz. = 573660 drs.

1. First, familiarize them with the divisions of the table, and the names of these divisions; then with their relative places.

2. When they know these well, explain to them their relative weights: that an *ounce* is as heavy as 16 drs.; or that 16 drs. is equal in weight to 1 oz.; or that 1 oz. and 16 drs. are the same

in weight. A pound, 16 oz. and 256 drams, equal each other in weight; that is, a *pound* equals 16 oz., and 16 oz. are as heavy as 256, $16 \times 16 = 256$ drs., &c. Go over the whole table in this way, questioning and illustrating till they, by answers, make it manifest that the relative weight of denominations is clearly understood by them.

3. Then question them as follows: which is heavier 1 dr. or 1 oz.? If an ounce is heavier, how many times is it heavier? Divide the ounce into sixteen parts; to what would each part be equal in weight? If each part be equal in weight to *one* dram, how many would eight parts want of an *ounce?* Then half an ounce would be the same weight as *eight* drams, would it? Then take a *pound*, an *ounce*, and a *dram*, and make them tell their relative differences in weight:—how many *drams* would equal *pound;* how many *ounces* would be the weight of a *pound;* how many would 6 oz., 8 oz., 12 oz., 15 oz., *each*, want of a *pound weight?*—Into how many divisions would you make a *pound*, so that each division would be the weight of *one dram?*—Two hundred of these divisions, or two hundred drams, would they equal a *pound* in weight? If not, how many more would you add to give the weight of a pound? And so on. Take then quarters, hundred weights, and tons, and question them on each similarly. This will prepare them for the next step, viz., oral and slate exercises.

Oral exercises.

5 ozs. / 7 " / 12 "	Are equal in weight, to how many drams?	= 80 drs. / = 112 " / = 192 "
8 lbs. / 9 " / 12 "	Equal each of these in ounces.	= 128 ozs. / = 252 " / = 336 "
2 qrs. / 3 " / 4 " / 5 "	Give the weight of each number in lbs.	= 56 lbs. / = 84 " / = 112 " / = 140 "
12 cwt. / 18 " / 22 " / 30 "	How many quarters in each of these?	= 48 qrs. / = 72 " / = 88 " / = 120 "
4 tons. / 5 " / 7 "	Change each of these into cwts.	= 80 cwts. / = 100 " / = 140 "

Slate exercise.

435 / 800 / 5742	Ounces to drams.	= 6960 / = 12809 / = 91872 drams.
587 / 8741 / 2887	Drams to ounces, &c.	= 36 ozs. 11 drs. over. / = 546 " 5 " " / = 180 " 7 " "
286 / 365 / 299	lbs. reduce to cwts., &c.	= 2 cwts. 2 qrs. 6 lbs. / = 3 " 1 " 1 lbs. / = 2 " 2 " 19 lbs.
573 / 884 / 236	qrs. to be given in cwts.	= 143 cwt. 1 qr. / = 221 " / = 59 "

Make them reverse processes; and as they advance gradually make questions more complex, as follows:

Reduce 7895 ozs. to cwt.; and the cwt. back to lbs.—proving and explaining each step of processes.

Reduce 7842 qrs. to ounces; the ozs. to tons, and then the tons to lbs.—giving reasons for processal steps, &c., &c.

JOHN BRUCE,
Inspector of Schools.

(To be continued.)

Discouraging Attempts to Sing.

"Jane, what are you trying to sing, the tune sung by the old cow when she died? What a discord!" Jane stopped singing, dropped her head upon the desk, and the bitter tears ran down her cheeks. The rest of the scholars laughed at the remark, and then proceeded to sing the remaining verses of the song; but although its harmony was not as before broken by the discordant tones of Jane's untutored voice, yet there was not the enjoyment usually experienced in this favorite exercise of the school, for a schoolmate's feelings had been wounded, and there was a real sympathy with her distress, caused by the teacher's thoughtless remark.

Seeing its effect, he was sorry for having spoken in such a manner, but thought that it would be forgotten by the morrow. Forgotten! all else might forget, but the remembrance of those words would always remain with Jane, to keep her, in future, from the vain attempt to sing. No, dearly as she had cherished the idea of becoming a singer, she would bury the desire, rather than subject herself to ridicule again. To *her* the fact that the teacher ridiculed her efforts, was evidence that she could never learn, and for the future she would be a sad and envious hearer when the school joined in singing, sighing that God had not given her an ear capable of distinguishing musical sounds.

I have not, in this brief sketch, overdrawn the picture. From my own observation, I am lead to believe that a very large number of boys and girls who have a real taste for music, and a longing to become singers, fail to do so just because their parents and teachers thoughtlessly discourage them by ridiculing their first efforts. Many teachers sacrifice the interests of such pupils to the harmony of a school choir, and, instead of pointing out pleasantly the difficulty and striving to cultivate the ear, they seek the offenders and request them not to sing, or make some remark calculated to ridicule them into stopping; and in nine cases out of ten, sensitive scholars will abandon the effort to learn, considering themselves unable to acquire the art.

Teachers, is this right? Would you pursue a similar course with a scholar in penmanship? If he failed to see at once the peculiar curves of each letter and to execute them, would you ridicule his attempts? By no means. You know that the eye must be trained to notice all the peculiar turns and then the hand taught to execute them, and, however rude and laughable the first characters may be, you encourage the pupil and lead him step by step forward towards success. Is it less necessary to encourage attempts to sing? Few are born with a knowledge of music more than of penmanship. It is true that some catch musical sounds much quicker than others, and we say they are born to be singers, but this quickness of perception in the ear is not more remarkable than that in the eye of many penmen, and if there are no defects in voice, I cannot see why a dull ear may not be cultivated to appreciate distinctive tones in music as well as a stupid eye can be brought to distinguish the curves of the letters in his copy.

It is an indisputable fact that there is among the young an almost universal love of music, and an equally universal desire to sing, and, without saying anything of the advantages of music at this time, I desire to know how *nearly* universal it may be made. I would suggest that some teacher of music give, from experimental knowledge, his ideas of dull ears in music, and how large a proportion of such may be cultivated.—*Rhode Island School Master.*

The Words we Use.

Be simple, unaffected; be honest in your speaking and writing. Never use a long word where a short one will do. Call a spade a spade, not a well known oblong instrument of manual industry; let home be a home, not a residence; a place a place, not a locality, and so of the rest. Where a short word will do, you always lose by using a long one. You lose in clearness, you lose in honest expression of your meaning; and in the estimation of all men who are competent to judge, you lose in reputation for ability.

The only true way to shine even in this false world, is to be modest and unassuming. Falsehood may be a very thick crust, but in the course of time truth will find a place to break through. Elegance of

language may not be in the power of all of us, but simplicity and straightforwardness are.

Write much as you would speak; speak as you think. If with your inferior, speak no coarser than usual; if your superior, speak no finer. Be what you say, and within the rules of prudence, say what you are. Avoid all oddity of expression. No one ever was a gainer by singularity of words, or of pronunciation. The truly wise man will so speak that no one will observe how he speaks. A man may show great knowledge of chemistry by carrying about bladders of strange gases to breathe, but he will enjoy better health, and find more time for business, who lives on common air.

When I hear a person use a queer expression, or pronounce a name in reading differently from his neighbor, the habit always goes down, minus sign before it; it stands on the side of deficit, not of credit. Avoid, likewise, all slang words. There is no greater nuisance in society than a talker of slang. It is only fit (when innocent, which it seldom is,) for raw school boys and one term freshmen to astonish their sisters with. Talk as sensible men talk; use the easiest words in their commonest meaning. Let the sense conveyed, not the vehicle in which it is conveyed, be your subject of attention.

Once more; avoid in conversation all singularity of accuracy. One of the bores of society is the bore who is always setting you right; who, when you report from the paper that 10,000 men fell in some battle, tells you that it was 9,999; who when you describe your walk as two miles out and back, assures you that it lacked half a furlong of it. Truth does not consist in minute accuracy of detail, but in conveying a right impression; and there are vague ways of speaking that are truer than strict fact would be. When the Psalmist said "Rivers of waters run down mine eyes, because men keep not thy law," he did not state the fact, but he stated a truth deeper than fact, and also truer.—*New-York Teacher.*

OFFICIAL NOTICES.



APPOINTMENTS.

EDUCATION OFFICE.

His Excellency the Governor General in Council was pleased, on the 6th March and 15th November last, to approve of the following appointments:

André Napoléon Montpetit, Esquire, Advocate, to be French Corresponding Clerk, Assistant Editor of *Le Journal de l'Instruction Publique*, and Librarian.

Mr. Pierre Chauveau to be Assistant Clerk of Accounts and Statistics.

SCHOOL INSPECTORS.

His Excellency the Governor General in Council has been pleased to make the following appointments:

Bolton McGrath, Principal of Aylmer Academy, William Jessie Alexander, Principal of Roxton Academy, and Michael Stenson, Teacher, Esquires, to be Inspectors of Schools.

Mr. McGrath will have charge of the Protestant Schools of the Counties of Ottawa and Pontiac, in place of William Hamilton, Esquire, resigned.

Mr. Alexander, who succeeds to Dr. Bourgeois, resigned, will have charge of the Schools of the Counties of Drummond and Arthabaska,—the Protestant Schools of Chester, Tingwick, Kingsey, and Durham, excepted;—and he will also have charge of the Schools of the township of Bagot, in the County of Bagot, and of the Catholic Schools of the County of Shefford.

Mr. Stenson will have charge of the Catholic Schools of the Counties of Richmond, Wolfe, Compton and Stanstead; also of the Catholic Schools of the electoral Town of Sherbrooke.

EXAMINERS.

His Excellency the Governor General in Council was pleased, on the 14th March last, to appoint Rev. William Bennett Bond, M. A., and Rev. John Jenkins, D. D., members of the Board of Protestant Examiners of Montreal, in the room and stead of the Rev. William Snodgrass, absent, and Rev. Dr. Flanagan, deceased.

SCHOOL COMMISSIONERS.

His Excellency the Governor General in Council was pleased, on the 14th ult., to approve of the following appointments of School Commissioners:

County of Champlain.—Batiscan: Flavien St. Mars.

County of Ottawa.—Hartwell: Octave Lamarche.

Same County.—Ste. Angélique: Amable Filiatrault.

County of Iberville.—Town of Iberville: F. X. Mongran.

County of Terrebonne.—Ste. Adèle: Messrs. Jules Meilleur, J. B. Legault and Pierre Lacasse, *fils*.

His Excellency the Governor General in Council was pleased, on the 7th instant, to make the following appointment of a School Commissioner:

County of Laval.—Le Bas du Bord de l'Eau de St. Martin: Mr. Antoine Terrien.

TRUSTEES OF DISSENTIENT SCHOOLS.

His Excellency the Governor General in Council was pleased, on the 23rd March last, to make the following appointments of Dissentient School Trustees:

County of Shefford.—Shefford: Messrs. Edouard Perras and Ludger Côté.

His Excellency the Governor General in Council was pleased, on the 7th inst., to approve of the following appointment of a Dissentient School Trustee:

County of Shefford.—Milton: Mr. Sewell Samuel Kent.

ERECTIONS, &c., OF SCHOOL MUNICIPALITIES.

His Excellency the Governor General in Council was pleased, on the 7th instant, to direct,

That that portion of the newly constituted Parish of St. Sébastien heretofore comprised within the School Municipality of Clarenceville, shall remain annexed to Clarenceville until the 1st of July next (1865); and that the portion which belonged to the Parish of St. George of Henryville shall remain annexed to the last mentioned parish as School Municipality until the 1st July next, and that the said parish of St. Sébastien as civilly erected shall, from that date, form a School Municipality.

DIPLOMAS GRANTED BY McGILL NORMAL SCHOOL.

Mr. Francis Hicks, B. A., received a diploma for Academies from the McGill Normal School.

March 29, 1865.

DIPLOMAS GRANTED BY BOARDS OF EXAMINERS.

BOARD OF EXAMINERS OF THREE RIVERS.

1st Class Academy (E. & F.)—Miss Léonie Hébert.

1st Class Model School (E. & F.)—Misses M. S. Elia Blanchette and Mathilde Goudreault.

1st Class Elementary (F.)—Misses Lumina Bussières, Eugénie Eloïse Duplessis, Marie Elise Larose, M. Hedwidge Pratte.

2nd Class Elementary (F.)—Misses Lumina Constantineau, Elmire Duguay, Sophie Fafard, Rose de Lima Godin, Rosiane Grantel and Henriette Marchand.

SHERBROOKE BOARD OF EXAMINERS.

2nd Class Elementary (E.)—Miss Catherine Dougan.

Feb. 7, 1865.

S. A. HURD,
Secretary.

SITUATION WANTED.

A Teacher holding a Diploma for Academies and who is competent to teach English and French. Enquire at this Office.

JOURNAL OF EDUCATION.

MONTREAL (LOWER CANADA), APRIL, 1865.

Elementary Education in France. (1)

The report of the Minister of Public Instruction for 1863 on the state of elementary education in France, which the Government has just published, has been very generally commented upon in the Paris press and has provoked much opposition. Containing information of the greatest practical value, this document, of unusual interest besides, has been objected to on account of some recommendations which it contains, and which, if acted upon, would establish a system of gratuitous instruction and compulsory attendance at school.

Without stopping to examine the merits or demerits of these suggestions, which, the *Moniteur* explained, were published as expressing the personal opinion of the minister only, and not as indicating the policy of the government in the matter, we shall proceed to lay before our readers a short *résumé* of this very elaborate paper.

The number of children in attendance at the primary schools of France had risen from 1,935,624 in 1832 to 3,530,125 in 1847 and to 4,336,368 in 1863; showing an increased ratio of from 59 pupils in every 1000 inhabitants at the first mentioned period, to 116 pupils in a like number of inhabitants at the date of the report. The number of public schools opened since 1847 was 3,566, affording instruction to 806,233 children and representing an annual increase of 50,000 in the number of children attending school. (2)

818 *communes* only are reported as without schools, in most of which however the children attended school in the adjoining parishes.

Taking the children of school age as defined in the regulations (7 to 13 years), it would appear that of the 4,018,427 returned in the inspectors' census of 1863 for the whole of France, only 3,133,540 attended the primary schools, leaving 884,887 as the number of children of this class who did not attend. It is true that the university enumeration reduces this number to 692,678, but as the teachers who compile the statistics have no means of ascertaining how many children are permanently absent from school in the cities, these figures are believed to fall short of the truth. Whatever may be the actual balance in this case, it is not to be inferred that the whole number of these children are totally deprived of instruction; many in fact receive lessons at home or attend the junior classes in superior institutions of learning, while others enter school one or two years after they have reached the lowest age prescribed or leave before attaining the highest.

The period of school attendance is, in general, regulated by the requirements of religious instruction, few children remaining at school after these have been fulfilled. There was no means of ascertaining the exact number of boys between the ages of 8 and 11 who did not pass through the public schools in 1863; but from data obtained by the administration it was apparent that of this restricted class, the number of non-attendants could not exceed 200,000.

Of the whole number of children frequenting the primary schools, 34.6 per cent., or over one third, attended during a period of less than six months. Of 657,401 pupils who left the schools in 1863, 395,393, or 60 per cent., could read, write and cipher, while 262,008, or 40 per cent., had totally or partially failed to acquire a knowledge of these elementary branches.

The rolls of the conscription and the registers of marriages furnish evidence pointing to the same conclusion. In 1862, 27.49 per cent., or nearly one third of the conscripts could neither read nor write; in 1830 the percentage was 43.73. Of the men who married in 1853, 33.70 per cent. could not sign their names; the percentage in 1862 being 28.54; of the women, the percentage was 54.75 and 42.26 during the same years respectively, giving an average of 37 and 35.90 per cent. for both sexes.

Thus it appears that nearly one third of the conscripts are unable to read or write; 36 per cent. of those who marry cannot sign their names; more than one fifth of the children of school age did not attend school in 1863, and that of the four fifths present the majority attended irregularly and only during a comparatively short time.

During the last sixteen years the number of illiterate conscripts diminished by 7½ per cent. only, a progress so slow that the Minister foresees that a considerable time must elapse before elementary education shall have become as widely diffused as in Germany, where the illiterate conscripts number but 2 or 3 per cent.

The statistics having reference to the criminal classes offer much that is suggestive of serious reflections. Of the 4,543 persons arrested for crimes in 1863, 1756 or 38 per cent. were quite illiterate, and 1964, or 43 per cent. could read or write but very imperfectly, thus showing that 81 per cent. of this unfortunate class had been deprived of the benefits of elementary instruction.

To effect the object which the Minister has in view, various suggestions of more or less importance are made, among which we find the improving of the methods of instruction followed in the schools, the promoting of the usefulness of teachers and the influence of school inspection, the stimulating of a healthy spirit of emulation in both teachers and pupils; financial reforms; the building of schoolhouses wherever they may be needed; adding to old schools as regards buildings, furniture and libraries; and last, though not least, the recommendations having reference to gratuitous instruction and enforced attendance, and which, as we have said above, were received with marks of disapprobation by a great part of the press.

These recommendations are supported by a detailed comparison of the French system with those pursued in other countries, but the opposition to which we have adverted above, caused the Government to hesitate before adopting them. A sort of compromise between the views of the Minister and public opinion will accordingly be found in the following propositions submitted by the Emperor to the Council of State. 1st. Teachers in independent elementary schools shall not be required to hold diplomas. 2nd. Communes whose population exceeds 500 shall be bound to maintain a girls' school. 3rd. Prizes for assiduity to be given to pupils attending the public schools regularly between the ages of 7 and 13. 4th. Female teachers to receive a minimum salary of 500 francs per annum. 5th. The stipends of male and female teachers acting conjointly to be elevated, and the appointment of such teachers entrusted to the Prefect. 6th. The right to establish free schools previously accorded to the communes to be rendered more effective in practice, for which purpose a tax shall be levied and, in cases of deficiency, grants from the Government shall be accorded. The male teachers in such schools to enjoy a fixed salary.

(1) The highly interesting report of M. Duruy is being published *in extenso* in our French Journal.

(2) These figures include the schools and pupils in the three annexed Departments. In Savoy and the County of Nice the public schools numbered 1,528, and the pupils attending the public and the independent schools, 86,812.

Evening Classes of the Montreal Mechanics' Institute.

PUBLIC DISTRIBUTION OF PRIZES.

Last evening a public examination of the classes of the Mechanics' Institute, took place in the hall of that building, an interested auditory being present.

The chair was taken at 7:30 by J. C. Becket, Esq., and upon the platform were his Lordship the Bishop of the Diocese and Metropolitan; the Hon. P. J. O. Chauveau, Superintendent of Education for Lower Canada; Hon. T. D. McGee; the Rev. Dr. Taylor, and other gentlemen.

Arranged on tables in front of the platform were a number of well executed specimens of architectural and mechanical drawings, as well as specimens of writing, all of which reflected great credit both on the classes and their teachers, and demonstrated the great benefits which must result from such a system.

Mr. J. C. Becket in opening the proceedings, addressed those present as follows:—

Ladies and Gentlemen,—The place I have the honor to occupy this evening seems to involve some explanation of the object of our meeting. It may be thought also that advantage should be taken of this opportunity of bringing before the public the importance, as well as the aims and object of the Mechanics' Institute. But fortunately I need not say much on either of these points, as we are to be favored with the assistance of others this evening, who will, no doubt, do them justice. I may be permitted to say, however, that though our Institute, as its name implies, should be sustained by the mechanics of this city, at least the English-speaking portion of them, yet we would not have it understood that it is, or should, be confined to that class of the community; on the contrary, we think it would be for the interest of all classes, without distinction, to foster and encourage this and similar institutions, by extending to them a cordial and liberal support, for it cannot be doubted that just in proportion to the general enlightenment of the masses, and the prevalence of correct principle as a rule of action, will the best interests of the entire community be promoted. Our present membership embraces only 641, individually divided into four classes:

Life Members	257
1st Class do	80
2nd Class do	100
3rd Class do	204

Life members by the payment of $20 purchase for life the privileges of the Institute. The three last named classes, by the payment of $3, $2, $1, respectively, have the free use of the well-stocked library, reading-room, classes, and occasional lectures. This latter, for two or three years past, has not been attended to as it ought; in the future, no doubt, steps will be taken to revive these. The more direct business of the evening, as announced, is the examination of the classes and the distribution of the prizes. The teachers will conduct the examination. The prizes allotted to the drawing-class will be distributed by His Lordship Bishop Fulford, and those of the English class by the Hon. T. D'Arcy McGee. The studies in the English class have been: writing, spelling dictation, arithmetic and book-keeping. With respect to the studies for these prizes, it should be explained that in two or three cases though only one prize has been awarded, more than one was merited by the same individual, but the Committee thought it better to extend the prizes over the pupils as generally as circumstances would permit. We ought also to state that the attendance upon the classes this season has been unusually good, and the attention bestowed by the scholars generally gratifying to the teachers. Complaints having been made in former years of the inattention of the members, especially of the English and French classes—for we have had French classes also, but not during the past winter—it was agreed this season to require all to pay 1s. 3d. as an entry fee, with the understanding that this would be returned to all who were orderly and attentive to the duties of the class.

	Pupils.
English Class	70
Drawing Class, Architectural	27
do Mechanical	9

I would only further remark, the friends of the Institute ought to know, that in years past, these classes have been the means of great good, it has come to our knowledge that there are several now in prominent positions, filling responsible situations, whose first lessons, in drawing especially, were obtained in these classes. Indeed the present teacher of the drawing class had not only his first lessons here, but also a taste awakened for such studies as promise at no distant day to place him in the front ranks of his profession. We will now proceed with the examination of the classes, and will take first the English class.

Mr. Muir then proceeded to examine the English class, who went through a number of exercises, testing their knowledge of Etimology and writing, with great credit, Mr. Muir explaining that he did not intend to go into a full examination, but only so far as to give an idea of the progress made by the members of the class.

Mr. Hutchison then proceeded with the examination of the drawing classes in practical geometry, as applied to mechanics. He then put a few questions relative to the simpler orders of architecture, such as the Tuscan, Doric, and Ionic, to shew the knowledge acquired of the elements of architecture. In conclusion, he spoke of the want of a modelling room, where pupils could construct objects from their drawings.

The exercises being brought to a conclusion, the Chairman announced an address by the Lord Bishop of Montreal, who would afterwards distribute the prizes for the drawing classes.

The Lord Bishop said—In distributing these prizes, I shall not attempt to enter largely into any discussion of the nature of your particular studies, such as your architectural drawing, and so forth. I shall especially avoid going into the details of such studies, as I should, thereby, perhaps, only expose my own ignorance, these not being branches that I am deeply learned in. But at the same time, I may express generally my satisfaction at seeing that this school seems to be increasing in value, united with increasing attention and usefulness as regards the pupils, during preceding years, as we have been told by the President of the meeting. Some years ago, when this building was first opened, I was asked to deliver a lecture here, when I particularly noticed the fact that persons like yourselves, connected with the Mechanics' Institute, would enjoy the advantage of classes for instruction, in which they might carry on their studies even after they had entered on the varied business of life. The presumption is, that all you who come here now, being voluntary students, really come for the purpose of making the best use of your time, independent of the positive amount of knowledge you may gain. For you should bear in mind, that if you are really making good use of your time, you are gaining those advantages arising from the improvement of your general faculties by their application to any particular study. There may be some branches of study that draw out the mind more than others, but there can be no branch of study carefully carried out that will not bring its own special advantages to the mind, in enabling it to concentrate itself upon a particular subject, and give the mind a clearness of thought and understanding, and application for any other purpose in after life. There are, no doubt, among all communities, now and then, what we may call master minds, that will distinguish themselves under any difficulties, and overcome any obstacles in either acquiring knowledge, or pushing themselves on in life; but these are the exceptions. The generality of men are those possessed of average abilities, and who cannot be expected to force their way on like those few exceptions I have mentioned. But if there are facilities given for improvement and study, in any way, there are a great many who might be very well qualified to take advantage of them, and profit by them in after life; and especially in a community like this, where there are such openings in life for all of you; it is of very great importance you should not lose such opportunities as are now afforded you in classes of this value. I see here a silver medal, which will be given by and by to one who is considered to have distinguished himself in general proficiency; and I may mention—I hope without any improper allusion to my own early life—that, though it is now nearly half a century ago, I remember, when I was at school, having had a silver medal given to myself. And I now remember perfectly well the satisfaction I experienced at having that little honorary distinction conferred upon me. I treasure it to this day as a memorial of my school days, and I trust that any prizes you may get now will be, in the same way, retained by you hereafter as memorials of your progress, and as a stimulus to the further prosecution of your studies, and not be regarded as a matter of mere gratification at the moment. I shall not take up more of your time by making other remarks, but proceed at once to the distribution of the prizes. (Loud applause.)

His Lordship now gave out the following prizes in the order observed:—

ARCHITECTURAL CLASS.

1st Prize, John Rutherfod, a set of compasses from Dr. Bernard; 2nd do, George Scott, a set of Planes, from H. Evans, Esq.; 3rd do, Thomas Ford, a set of Squares, from C. Snowdon, Esq.; 4th do, Rufus Dorman, a set of Instruments.

MECHANICAL CLASS.

1st Prize, H. Ward, set of Instruments; 2nd do, H. B. Warren, a spirit level, from J. Walker & Co.

The chairman then introduced,

The Hon. T. D. McGee who came forward and said, that it was only in consequence of the absence of Mr. Chamberlin that he was present. Hitherto he had had an honorary connection with the institution, but until that evening he had never been with them. He would take the liberty of urging upon the English class the importance of

good spelling and laying a proper foundation for a clear manly style of hand writing. He was in the habit of receiving many hundreds of letters himself, and he thought people often formed opinions of a man by his writing and spelling. There were some fortune-tellers who would predict whether an individual was to be married two or three times, and other circumstances, from a specimen of his calligraphy. Without going so far as this, however, he had no doubt that many a fellow lost his chance in life by inattention to this important point. The presumption was that where a man wrote a good hand, with bad spelling, he was a careless man, as if he had ability to learn to write well, he ought also to have acquired a knowledge of spelling. As the two stepping-stones to success, every boy not absolutely stupid, ought to acquire a knowledge of spelling and writing; and he was glad to see from the few slates not rubbed out, that the class did credit to Mr. Muir. He regretted to hear that in consequence of the difference in the ages of the pupils, and other circumstances, it had not been found possible to continue a class for English grammar, as it would be a great advantage. He would make it the basis of an appeal to the master mechanics of Montreal for supporting the Mechanics' institution, especially when they considered the benefits accruing to the rising generation therefrom. There ought to be as many master mechanics willing to support the institution at least, as there was life members, and many more than there were members in the other classes. They had seen that night whoever gave support to the institution was laying the foundation of that leading industrial position which was destined to be one of the characteristics of Montreal. The great object was to make the mechanics class capable of undertaking the higher branches of their art. What made some artists more valuable than others? He knew men in New England travel far and wide in search of such men, and even cross the Atlantic in search of them, in order to place them at the head of their establishments. The hon. gentleman then remarked that if the attention of young men could be turned to the higher branches of these pursuits, it would be much better than their going into the over-crowded professions where, in order to retain a position very little better, it was necessary to keep up certain appearances. He would ask the master mechanics to support the Institution in such a manner that in future the pupils of the different classes would fill the whole room. With these few remarks he would present the medal to Robert Hythe for general proficiency. The hon. gentleman then distributed the following prizes with many humorous remarks, which elicited much applause.

ENGLISH CLASS.

For general proficiency Geo. Hyde, a silver medal from Class Com.

PENMANSHIP.

1st Prize, H. W. Becket, "Life of General Wolfe;" 2nd do, James Clelland, "Chemistry of Common Life," 2 vols.

DICTATION.

1st Prize, E. O'Connor, "Speke's Journal;" 2nd do, George Ballery, "Archaïa."

ARITHMETIC.

1st Prize, J. H. Jackson, "Arctic Researches;" 2nd do, John Mearns, "The Peasant Boy Philosopher."

ATTENDANCE AND DILIGENCE.

1st Prize, Wm. Salter, "Life of Franklin;" 2nd do, Wm. Clelland, "Self Help."

Mr. Becket then stated he had to introduce something that was not in the programme. The drawing class intended to present their teacher with two handsome volumes, at which, he presumed, the whole class were equally delighted. The volumes were the "Imperial Gazetteer."

Mr Hutchison, who had assisted in the distribution of the prizes, then stated it was the first time he had heard of the affair. Addressing his class as fellow-students, he said that parties on this occasion were told before hand; but this not being the case in the present instance; it was out of his power to thank them. He would, however, give them a few words of advice. Mr. Hutchison then stated the fact which had pleased him most was the regular attendance of the members of the class during the winter. He then pressed upon them the necessity of hard study. Alluding to his own early experiences, he asserted that if they set their minds to acquire knowledge books would be sure to come to hand. (Cheers.)

The Chairman then introduced the

Hon. P. J. O. Chauveau who said that it only remained for him to congratulate them on the satisfactory nature of the proceedings. The question of the Industrial Schools was that of the day all over Europe. He trusted the beginning made here would be an example to the rest of the country, such schools having been established in France, Belgium and elsewhere. Referring to evening classes, he observed they met the wants of a large class in the community, especially of children who had to spend the day in earning their daily bread, and he thought in this matter the children in cities had the advantage of those in the country. He said that the fact of young men attending evening classes was one of the best certificates they could have. A large proportion of them got on in the world, of which there were many examples known in other countries, which show that if a man was determined to get on he could do so. Knowledge acquired under difficulties was more prized. As example was better than argument, he would relate an instance. The hon. gentleman then related an instance of a young man who came to Quebec, being unable to either read or write, and attended evening classes. At the time of the war of 1812, he entered into a trade and realized a small fortune. In gratitude for his success, he was one of the most zealous and generous founders of the charity schools in his city, and died with a fortune large for the times (about £30,000.) The grand son of that man who was then adressing them was sent to college and taught all sorts of things, but, he was sorry to say, after all, would not leave so much money behind him. (Cheers and laughter.)

Dr. Taylor, in consideration of the late hour, confined himself to a brief expression of the importance and value of the Mechanics' Institute, and said he would leave that meeting with a deeper sense of its claims for support.

The Chairman, in conclusion, thanked the gentlemen who had assisted to carry out the programme, and also the audience present, whom he regretted were not more numerous.

The proceedings then terminated.—*Montreal Gazette.*

Notices of Books and Publications.

Russell.—Canada; its Defences, Condition and Resources; By W. H. Russell, LL.D. London, 1865; Bradbury and Evans, 8vo. pp. 352, two maps.

The special correspondent of the *Times*, as in duty bound, has turned to good account his short excursion to Canada. When we consider out of what scanty materials, and with what a slender acquaintance with men and things this volume has been manufactured so as to be brought out just at the time when the defences of Canada are the chief topic of the day, we feel inclined towards indulgence and lenity for the very many blunders, historical, social and geographical which it contains. There is less of that patronising tone usually to be found in European books on America; and the several elements of our society get something like fair play at the hands of Dr. Russell.

He is also one of those who have not made up their mind to give up at a moment's notice, the good old British device "Ships, Colonies and Commerce," and the whole book is a talented and sincere apology for the colonial system. This is particularly refreshing at present.

We therefore see no great harm in Dr. Russell mistaking the river St. Charles for a lake, or conducting the Rideau canal from lake Huron to the Ottawa, or speaking of the *Jesuit* Hennepin, when this rather inaccurate writer is known to have been far from even friendly to the sons of Loyola; these are mere matters of detail that can be easily corrected by those who know better and will not poison the mind of the uninformed reader. Neither shall we call him to account for describing as *something very much like daubs*, the remarkable tableaux which adorn the nice Louis XV chapel of the Ursulines convent, and which were brought from France at the time of the revolution by the abbé Desjardins who was afterwards vicar general of Paris.

A good many exceptions of a more important character might be taken to other passages in the work; the efforts of the French missionaries for instance, in the days of Champlain and of Frontenac, are grossly misrepresented, the author going even the length of saying that Indians were converted only that they might rage with greater fierceness against their brethren.

The following is a *résumé* of the military views and opinions of the author.

"Permanent works might be erected at St. John's, the Isle aux Noix and St. Helen's Island, where forts should be reconstructed on improved principles. But the most obvious measure, in the opinion of some engineers, the fortification of the hill over the city, and the

erection of a Citadel upon it, which would render the mere occupation of the town below valuetess to an enemy, is not approved of by more recent authorities.

" Gunboats on Lake St. Louis would prove most valuable in defending the works at Vaudreuil.

" Quebec is however the key of Canada; and that key can be wrested from our own grasp at any moment by a determined enemy, unless the recommendations so strongly urged from time to time by all military authorities meet with consideration. The old enceinte should be removed, and the French works restored, according to the suggestions of scientific officers, and of the ablest engineers we possess. An entrenched camp might be marked out to the west of the Citadel, with a line of parapet and redoubts extending from the St. Lawrence to the St. Charles river. In order to cover the city from an attack on the south side, it would be necessary to occupy Point Levi, and to construct a strong entrenched line, with redoubts at such a distance as would prevent the enemy from coming near the river to shell the city and citadel. But it is evident that they are *nil ad rem*, unless behind these works, and in support of them in the open, can be assembled a force of sufficient strength to prevent an investment, or to attack the investing armies, and at the same time to hold the front against them in the field. It is estimated that 150,000 men might hold the whole of the Canada, East and West, againts twice that number of the enemy. If we are to judge by what has passed, it is not probable the United States will be inclined or able for such an effort. Quebec might be held with 10,000 men against all comers. From 25,000 to 30,000 men would make Montreal safe. Kingston would require 20,000 men, and Ottawa would need 2000. The greater part, if not all of them, might be composed of militia, and volunteers trained to gunnery and the use of small arms. For the protection of the open country, and to meet the enemy in the field, an army of from 25,000 to 35,000 men would be needed from Lake Ontario to Quebec. The western district on Lake Erie could not be protected by less than 60,000 men.

Thus, in case of a great invasion from the United States, Canada, with any assistance Great Britain could afford her, must have 150,000 men ready for action. What prospect there is of this, may best be learned from a consideration, not so much of the resources of Canada, as of the willingness of the people to use them."

The author is alone responsible for the following rather amusing anecdote.

" Formerly flint pistols were served out to the frontier patrols, but of course percusion locks have, for many years, been given to all those employed in the service of the Crown in a military capacity. Some worthy official at home, however, still continues to send out barrels of flints with laudable punctuality, as he has not been relieved by superior order from the necessity of keeping up the supply of these articles. We have all heard of the forethought evinced by the home authorities, when they sent out water-tanks for our lake flotilla, forgetting that they were borne on an element quite fit for drinking. But I heard in the citadel of a still more remarkable instance of thoughtfulness.

" A ship arrived at Quebec some time ago with an enormous spar reaching from her bowsprit to her taffrail consigned to the storekeeper. It had been the plague of the ship's company, it had been in everybody's way, and had nearly caused the loss of the vessel in some gales of wind. The whole resources of the quarter-master-general's department were taxed to get it safely on shore, and transport it to the heights. And what was it? A flag-staff for the citadel. And what was it made of? A stout Canadian pine, which had probably been sent from the St. Lawrence in a timber ship to the government officials at home; who, having duly shaped and pruned sent it to the land of its birth at some considerable expense to John Bull."

Thoreau.—Cape Cod, 12mo pp. 252; Boston 1865. Ticknor and Fields.

A charming volume, well written, unpretending and replete with a pleasant though by no means shallow thoughtfulness. For those who do not know exactly where to find Cape Cod we give the rather humoristic topography of the place as set forth by the author in the first page. " Cape Cod is the bared and bended arm of Massachussetts; the shoulder is at Buzzard's Bay; the elbow or crazy bone at Cape Malabar; the wrist at Truro; and the sandy fist at Provincetown, behind which the State stands on her guard, with her back to the Green Mountains, and her feet planted on the floor of the Ocean like an athlete protecting her Bay,—boxing with north-east storms, and ever and anon, bearing up her Atlantic adversary from the lap of the earth—ready to throw forward her other fist, which keeps guard the while upon her breast at Cape Ann."

March.—Method of Philological study of the English Language; By Francis A. March, Professor in Lafayette College, Pensylvania; 12mo., 118 p. New York, Harper; (Montreal, Dawson).

Hooker.—Mineralogy and Geology; By Washington Hooker, M. D., being the third part of Science for the School and Family; 8vo., 360 p. New York, Harper; (Montreal, Dawson).

This work is ornamented with nearly 200 engravings and brings the subject up to date; in this respect, however, much of what it teaches may have to be forgotten to make room for more recent discoveries upsetting the whole of former theories. Without wishing to find fault with such books, nor with the teaching of such branches as these in our academies, we must say that great care ought to be taken to confine the teaching to facts and theories which are generally admitted in the present state of science. Even of these a sufficient number will soon be dropped.

Burton.—The Culture of the Observing Faculties in the Family and the School, or Things about Home, and how to make them instructive to the young; By Warren Burton; 12mo., 170 p. New York, Harper.

A very long title for a very small book; but a very useful volume for its size. We shall give extracts in our next.

Modern School Geography and Atlas, prepared for the use of Schools in the British Provinces. Montreal and Toronto, Campbell.

This new school geography and atlas, which, we believe, is printed in New York, is of a somewhat smaller size than Lovell's. It contains 19 maps and 76 pages of text in small quarto. It is well got up, and the maps are remarkably clean and well printed; the reading matter is substantial, methodically arranged and remarkable for its conciseness; but perhaps it is a little too dry. Picturesque and interesting details, contribute to awaken the curiosity of pupils and to help their memory by making a stronger impression. It is on this account that Mr. Holmes' French Geography, although unaccompanied with maps or engravings of any kind, is still so popular with teachers and pupils in Lower Canada.

Cameron.—Lecture delivered by the Hon. Malcolm Cameron to the Young Men's Mutual Improvement Association. Quebec 1865, 8vo 36 p. Desbarats.

In this lecture the Hon. Malcolm Cameron has related his travels on the American coast of the Pacific. The following description of New Westminster the capital of British Columbia, written by one who is so well known in Canada, will be read with interest.

" From Vancouver I took the Hudson Bay Company steamer " Enterprise " to New Westminster, the capital of British Columbia, 63 miles from the island; the greater part of the distance, say, 36 miles we were among the islands, safe as a river, the main crossing being 11 miles, to the mouth of the Fraser river, about 6 miles north of the 49th parallel of latitude, the Boundary line between British Columbia and the United States. The entrance to the river is low and grassy and has been misrepresented by local jealousy; it only requires a light-ship to be made perfectly accessible at all times to vessels of 18 to 20 feet draft. Her Majesty's men-of-war have gone up and thus settled the question beyond dispute, for in spite of repeated assertions of dangerous bars, and shallows and what not, *the fact is proved* that the mouth of the Fraser is safe and commodious, and the river perfectly navigable to Fort Langley far above New Westminster.

" From the mouth of the river to the capital is 12 miles, filled with islands of the richest deposit, only requiring draining and dyking to become the best farming land on the Pacific, they are of immense value and capable of sustaining 20,000 people.

" The site of New Westminster on the left bank of the river is very fine: rising almost too abruptly from the water to a height of about 200 feet; several streets are well graded, the mint is a neat building, the general hospital is a most creditable undertaking, the Episcopal church is a perfect gem—but the gaol is a miserable hovel. " The Camp " was the residence of Colonel Moodie, Royal Engineers, and the barracks of the soldiers of his corps. And here I must not omit to say how much the colony owes to that excellent officer and most sincere Christian, and his amiable and pious wife; the morals and character of New Westminster stand far above any other place on the Pacific, and I could attribute this very much to the purity, liberality and Catholicity of his religion, which so much aided and strengthened the hands of Mr. White, Methodist, and Mr. Jamieson, the Free Church, as well as the Episcopal ministers, in all their efforts for the people's good. His liberality extended to aiding the Abbé Fouquet, Roman Catholic Missionary, in his extraordinary efforts for the

Christianizing of the Indians, four thousand of whom he vaccinated in his travels—saving thousands of lives.

" The lands about New Westminster are covered with the most enormous growth of Douglas pine trees 300 feet long, 10 to 15 feet through, 200 feet without a limb, they are now unsaleable and to clear the land would cost $100 an acre. The country is all rough and by no means generally good for farming, but at present prices money is made by farming. However, with her inexhaustable resources of coal, iron, copper, silver, and gold, and her position as the terminus of the road from the Atlantic, I feel assured that New Westminster will be one of the finest towns on the continent.

" One of the chief products of the colony is in such abundance that my word has been doubted in reference to it, I mean salmon. In crossing the Colquhalla the horses feet struck the fish, and a mill stopped because the mill race was filled with them. The Hudson Bay Company used to export thousands of barrels till the gold fever raised the price of labor too high.

" The elevation of the city gives magnificent scenery. Views of Mount Baker 10,000 feet high, Gulf of Georgia, bend of the Fraser river, and the Mountains of Washington Territory covered with everlasting snow, give it a picturesque beauty and interest never to be forgotten."

MONTHLY SUMMARY.

EDUCATIONAL INTELLIGENCE.

— Rev. Mr. Beausang is at present in Montreal collecting subscriptions for the Dublin University. He has been very successful, it is said, at Quebec and in this city, having obtained among other subscriptions, $1000 from the Seminary of St. Sulpice, and $100 from Hon. A. Quesnel.

— The Laval University is about to establish a botanic garden, a lot of land situated on the Grande-Allée Road, in the environs of Quebec, having been secured for the purpose at a cost of $6,250.

—The Laval University met with a serious accident on the night of the 24th March last, the wing of the Seminary situated nearest to the University building having been destroyed by fire. Some of the students who slept in this edifice were in great danger of losing their lives, and their escape is due to the activity and presence of mind of two of their number, Messrs. Decelles and Humphrey who improvised a means of retreat from the impending peril. The library of the students in divinity, containing 3000 volumes besides precious manuscripts, was lost. This is the third conflagration which has overtaken this institution, the first having taken place in 1701, and the second in 1705.

FINE ARTS INTELLIGENCE.

— The exhibition, of the Art Association of Montreal came off very successfully at the Mechanics' Institute. This exhibition, the third held by the Association, was opened on the 27th February by the Lord Bishop of Montreal and continued during several weeks.

— It is intended to render more complete the collection of paintings to be hung in the splendid gallery attached to the new Parliament building at Ottawa. Mr. Hamel has accordingly just executed the orders he had received from Parliament for portraits of Champlain, Charlevoix, Wolfe, Montcalm, Chevalier de Lévis, General Murray, and Messrs Neilson, Bourdages and Andrew Stuart; and he is now engaged on a full length portrait of Chancellor Blake.

SCIENTIFIC INTELLIGENCE.

—A modern writer on nature and art has spoken of the gradual, but sure decrease of body in the Alps mountains; his thoughts and observations the traveller may easily verify. It is written of men that they do all fade as the leaf. The hills, also, are wasting and wearing away, and slowly running down to the sea. The valley is a witness to the mountain's weakness. The glacier pulverizes the rock, and every mountain streamlet carries down its contributions to the plain, perhaps each drop a sand-grain. The waste of the mountains is forming new earth. Nearly every Alpine lake is proof of this. The Rhine deposits in Lake Constance have formed a large delta. What was formerly a large bay in Lake Lucerne is now a marsh, and in another part the rocks that one little brook has brought down have nearly stopped navigation. The earth that the Rhone has gathered has shortened the southern horn of Lake Geneva nine miles. By observing and weighing the amount of sediment in a certain quantity of water taken from the glacier streamlet, the number of tons which Mont Blanc annually loses was at once estimated. It thus becomes a matter almost within the range of mathematical calculation to compute the number of years when the mountains shall have yielded their strength, and when the " hills shall have been made low."—*Ib.*

— By means of a photographic process, copies of drawings can be made rapidly and cheaply of the same size as the originals. The original drawing is in no way injured by the process, and the copy is produced by simple superposition over the chemically prepared paper, and is a positive copy direct without the intervention of a negative.—*J. of Arts and Manufactures, U. P.*

—The *Cernean*, a paper published in Port Louis, Mauritius, contains the following extraordinary announcement according to *Galignani*: — " M. Chambay has succeeded in fixing the colours of the objects. The picture is taken instantaneously, as in other kinds of photography. The modelling and relief are marvellous: the blood appears to circulate beneath the skin; the colour is fixed; and the portraits, which present a surprising resemblance are equal to the finest pastels, miniature, or water-colour drawings. M. Chambay is about to remove to Paris."—*Ib.*

—Recently a pneumatic dispatch apparatus was tried in Manchester in connection with telegraphy. Owing to the increase of their business in Manchester, the Electric and International Telegraph Company has lately taken extensive premises in York street, and opened a central station there. In order to facilitate the rapid dispatch of messages from the branch offices at Ducie Buildings (Royal Exchange) and No. 1 Mosley street, it has been deemed advisable to connect these offices with the central station by means of the pneumatic system, the same as is adopted by the company in London and Liverpool. Between the branch offices above mentioned and the central station leaden pipes with an inside diameter of 1½ inches have been laid down under the streets. The leaden pipes are made perfectly air tight, and are inclosed in 2 inch iron pipes to protect them from being damaged. At the central station there is fixed in the basement a small high-pressure beam engine, and connected with it a double-action air pump, 17 inches in diameter and 15 inch stroke. The pump is continually at work exhausting the air from a cylinder 8 feet long and 4 feet in diameter, which is styled the vacuum cylinder. The pipes which pass under the streets from the branch offices are terminated in the instrument room on the top floor of the building, and the pipes from the vacuum cylinder are also carried to the same place, and they can be put in connection by simply opening a valve. The carriers which travel through the pipes are made of gutta percha covered with felt. They are about five inches long and of a diameter nearly equal to that of the pipe. They are hollow inside for the purpose of containing the messages. Electric bells are employed to give the necessary signals for the working of the pipes.—When the officials at the Ducie Buildings office wish to send a "carrier" they place one in the mouth of the pipe and signal the central station by ringing its bell. The clerk in attendance at the latter place by moving a small lever, puts the pipe in communication with the vacuum cylinder. The air in the pipe then rushes into the vacuum cylinder, and the "carrier", having the ordinary atmospheric pressure behind it, is propelled through at a speed of from 35 to 40 miles an hour. On the arrival of the " carrier " at the central station it strikes against a spring buffer, which, by a simple self-acting contrivance, cuts off the communication between the pipe and vacuum cylinder, and the carrier falls from the valve on to a counter prepared to receive it. To send a " carrier " from the Mosley street office the action is precisely the same. By using a second chamber, and compressing air into it, a force is obtained for blowing the " carriers " from the central station to the branch offices, so that the pipes can be made available for carrying in both directions. The branch office in Mosley street is about 320 yards from the central office, and the distance of the Ducie Buildings from the branch office, is 510 yards. The time occupied by a " carrier " in traversing the shorter distance is 22 seconds.—*Engineer.*

—A singular circumstance was communicated to the French Photographic Society at its last sitting, by Mr. Placet. The magnesium light is so powerful, that when placed at a short distance from the object-glass, it will melt its surface. An object-glass spoilt in this way was produced by him at that sitting. Photographers had better take the hint, and not bring the light too near the apparatus.—*Ib.*

—According to a report to the Italian Government the coral fisheries, which are a great resource for the poorer classes, employ 460 boats, manned by about 4,000 men. The fishing implements, pay of the men, board of the crew, etc., absorb annually about 6,000,000 francs, distributed among more than 6000 persons of different professions. About 160 tuns of coral are annually introduced into the kingdom of Italy. The articles made of it and exported are to the value of from 12,000,000 to 16,000,000 francs yearly, principally sent to Asia, the interior of Africa and America.

MISCELLANEOUS INTELLIGENCE.

—The project of the Confederation of the British North American Provinces has been approved in the Legislative Council by a vote of 45 against 15, and in the Legislative Assembly by a vote of 91 against 33. The vote among the Lower Canada members was as follows; Yeas 37, nays 25,—total 62; among Roman Catholics, yeas 28, nays 24,—total 52; French Canadians, 27 against 22. As however several counties represented in Parliament by English and Protestant gentlemen are to be classed as French and Roman Catholic, the last figures may not give an exact idea of the true state of the interested parties in that respect.

The Assembly was occupied during seven weeks in discussing the subject, and the debate was then only terminated by the Government moving the *previous question*, which was done when news of the elections in New Brunswick was received, Hon John. A. McDonald announcing that it was the intention of the Government to ask for the necessary supplies to defray the expenses of the civil service and provide for the defences of the country, and to prorogue Parliament as soon after as possible and call another session during summer. He added that several members of the administration would then immediately leave for England in order to confer with the Imperial Government on the subject of the proposed confederation. Messrs. Cartier and Galt accordingly took their departure for England on the 12th instant, Messrs. McDonald and Brown following on the 19th. The Hon. T. D'Arcy McGee who goes to the Dublin Exhibition as Canadian commissioner, accompanies the last named gentlemen.

The sums asked for—including two million dollars for military and militia expenses—were granted by very large majorities. Hon. Mr. Galt, Minister of Finance, in the Assembly, and Hon. Mr. Ross, in the Legislative Council, pointed to the necessity which was felt for a definite understanding with England in regard to our defences, declaring that Canada was willing to fulfil its part of the duty, which should be in proportion to the limited resources of the colony.

—Mr. Dion, photographic artist of this city, is the inventor of a fire alarm, remarkable alike for its simplicity and the great ingenuity displayed in its construction. It occupies very little space, being in the form of a small box, and can be placed in almost any situation. On a rise taking place in the temperature of the room in which it may be, it will at once give the alarm by ringing a bell which can be hung anywhere at pleasure. The inventor has applied for a patent.

—The New Atlantic cable, which is now in process of manufacture in England, is to be about two thousand five hundred miles long, allowing four or five hundred miles for all contingencies. Its core, through which the electricity passes, is to be composed of seven strands of the best copper wire, making together over seventeen thousand miles of copper wire; this is to be enclosed in eight coats or layers of insulating material; then follow ten coatings of jute, and ten iron wires. Each wire is covered separately with five twists or strands of yarn.

About eight hundred miles of this cable is now ready, and is being placed on board of the Great Eastern, and will fill one of the three large tanks prepared to receive it. It is intended that in June next the whole two thousand five hundred miles of the cable will be ready to pay out from the Great Eastern, and be sunk "down among the dead men," who, for once, will have their connection with the living world of humanity resumed wherever their bones come into contact with the cable.—*Hunt's Merchants' Magazine.*

NECROLOGICAL INTELLIGENCE.

—Among the many dark deeds that overshadow the page of history, the assassination of President Lincoln must ever occupy a conspicuous place —a hideous spectre pointing an era in the book of time. The fearful tragedy enacted on the evening of Good Friday in the theatre at Washington spread a feeling of horror and dismay wherever the appalling news was received, business was generally suspended and flags were hoisted at half mast on public and other buildings throughout the Provinces. Abraham Lincoln, whose straightforwardness and characteristic simplicity of manner were popularly recognised in the nickname "Honest Old Abe," was a native of Kentucky but had removed to the West with his family at an early age. He was admitted to the Bar and practised law very successfully during many years at Springfield, Ill.; and having been thrice elected to the Legislature of his adopted State, and returned to the national Congress as representative, he was at length chosen to the highest place in the gift of his fellow countrymen in 1860, and had just been inaugurated as President for a second term of office when the hand of the assassin cut short his earthly career. Mr. Lincoln was about 56 years of age at the time of his death.

—The death of Cardinal Wiseman created a lively sensation in England recently, and a vast multitude assembled to witness his obsequies, which were performed with the most imposing solemnity. Many of the nobility were present, as were also the ambassadors of France, Austria, and Greece, together with other members of the diplomatic corps and illustrious persons. The funeral service was performed by the Bishop of Troy in presence of the Archbishop of Dublin and eleven bishops. Upwards of 30,000 persons were admitted and passed in procession through the church during the ceremony. Cardinal (Nicholas) Wiseman was born at Seville in Spain, in 1802, and was the son of James Wiseman, a merchant of Waterford, and Ann Strange who died in 1851. His family claims to be of high antiquity in England, and includes a baronetcy conferred by Charles I.

—The late Mr. Justice Gale was born at St. Augustine, East Florida, in 1783. He was educated at Quebec while his father was Secretary, and came to study law at Montreal under the late Chief Justice Sewell, in 1802, having the late Chief Justice Rolland and, we believe, Mr. Papineau as fellow students. Mr. Gale was admitted to the bar in 1808, and ere long secured a large practice. In 1815 he was appointed a magistrate in the Indian territories, and accompanied Lord Selkirk when he went to the North-west. Later, when Lord Dalhousie was attacked for his Canadian administration, he went home as bearer of memorials from the English-speaking Lower Canadians in the Townships and elsewhere, defending his Lordship's conduct. In 1829, he became chairman of the Quarter Sessions, and in 1834 was raised to the bench to replace Mr. Justice Uniacke, who preferred to resign the seat on the Bench to which he had just been appointed rather than come back to Montreal during the cholera, then raging here. Judge Gale retired from the Bench in 1849, forced into retirement by continued ill-health and the gradual coming on of the infirmities of old age. He had married in 1839, a Miss Hawley, of St. Armand West, by whom he leaves three daughters. Mrs. Gale herself died several years ago. Born of parents who had both suffered for their loyal adherence to the British Crown during the American revolution, and educated in their views, Mr. Gale was, as long as he meddled in politics a staunch conservative and defender of British connection and British supremacy.

Both as lawyer and judge he won the respect of his *confrères* alike by his ability and learning. Of late years his heart has been deeply interested in the freedom of the slave. He could not speak with patience of any compromise with slavery, and waxed indignant in denunciation of all who in any way aided, abetted, or even countenanced it. When the Anderson case was before the Upper Canada Courts he was one of the most active among those who aroused agitation here. When the Prince of Wales visited the country he got up a congratulatory address from the colored people of Canada, which, however, was not received, as the Prince was desired by the Duke of Newcastle not to recognize differences of race and creed wherever it could be helped. He was a man of high principle, and ever bore an unblemished moral character. He was a scrupulously just man, most methodical and punctual in business matters. There were also in his writings great care and precision and clearness of language. In his letters, too, and even in signing his name, the same trait was observable. He often used to condemn the stupid custom of men who signed their names with a flourish, yet so illegibly that no one could read, but only guess at, the word intented. He was not ostentatious of his charities, yet we know they were not lacking. Some years ago he made a gift of land to Bishops' College, Lennoxville, and during the last month of his life, when age and illness were day by day wearing him out, he found relief for his own distresses in aiding to relieve those of the needy and afflicted.

With him has passed away one more of the links which have bound the bustling men of middle age to-day with a generation of which the youth of to-day know almost nothing, of men more proud and more precise in their manners than we are, but also of such rectitude and sense of honour, that we feel deeply the loss of the influence of their example. A loyal subject, a learned and upright judge, a kind, true, steadfast friend has been lost to the community in Judge Gale.—*Montreal Gazette.*

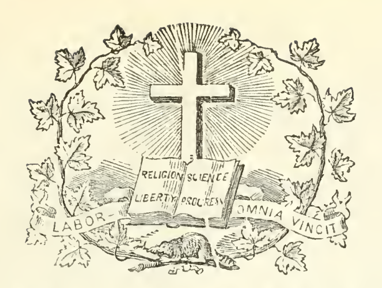
STATISTICAL INTELLIGENCE.

—The Indians dwelling within the United States are fast disappearing from among men. In 1840 there were 400,000: in 1850, 350,000, and the census of 1860 shows only 295,400. This is a decrease of 50,000 every five years. The proportion of decrease is steadily augmented as the path of empire takes its way westward. How many years will elapse, at this rate, before the Indian savage will exist only in the history of Schoolcraft, the prose fiction of Cooper, and the poetry of Longfellow? The civilized Indian flourishes better than the wild one, for in the State of New-York (the last census says) we have 3785 aborigines, whereas in Colorado only 6000 were left in 1860.

The principal Indian populations are distributed as follows: West Arkansas, 65,680; New-Mexico Territory, 65,100; Dakotah Territory, 30,664; Washington Territory, 31,000; Utah Territory, 20,000; Minnesota 17,900; California, 13,660; Kansas, 8180; Nevada Territory, 7520; Oregon, 7000.—*New York Teacher.*

—Ten years ago, the whole amount of business done by the wholesale newsagents did not probably exceed in amount the sum of $750,000 yearly. Now the cash receipts of the American News Company of New York for the sale of newspapers, magazines, books and stationery, for the eleven months ending with the thirty-first of December last, have reached the sum of $2,226,372,83. We learn from the office of that company, that probably forty millions of newspapers were handled within that time by persons in the employ of the company, of whom seventy were constantly occupied in getting them in, charging, distributing and shipping them. For wrapping paper and twine, with which to pack this enormous mass, the company paid twelve thousand dollars.—*Hunt's Merchants' Magazine.*

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LITERATURE.

POETRY.

SOLEMN WORDS.

BY MRS. LEPROHON.

See, Love, watch the lovely shading
Of the bright clouds softly fading
From yon sunset sky above us,—gaze, for soon will they be gone.
One would think mid them were given
Glimpses of that glorious heaven
To which with humble faith, I trust I am journeying on.

Ah! why sorrow thus so madly
When I whisper to thee sadly
That for a speedy parting, we must both our hearts prepare?
Of all regrets that grieve me,
The sharpest is to leave thee
O'er burdened, overwhelmed with such terrible despair.

Had it been the will of heaven
That long life should me be given,
I'd have been a fond companion, a true and tender wife,
But, perchance, our love fond, yearning,
Would have kept our hearts from turning
To all thoughts or aspirations of a higher holier life.

Ah, whisper not despairing
That grief thy heart is tearing,
That thou wilt not, cans't not bow to heaven's stern decree,
But dearest, tell me rather,
That our kind and heavenly Father,
In mercy and in wisdom, knows what's best for me and thee.

Thou art only in the dawning,
In the bright and sunny morning
Of a manhood full of promise, of genius' noble pride,
And because one hope is banished,
From thy sky one lone star vanished,
Thou must not from earth's highway, useless, aimless turn aside

To that dark and dreary valley
In which none may pause or dally,
If murmuring, if still grieving, I am quickly hastening on,
But the One whose arms will fold me,
Will, beloved, too, uphold thee,
And be thy mighty solace, and thy comfort when I'm gone.

Up, Love, banish now this sorrow,
Nor shrink weakly from the morrow,
Whate'er of grief it bring thee, or myself of dying pain,
But whilst thus my cold hand pressing,
Whispering tender word and blessing,
Promise, darling, thou wilt live so in heaven we'll meet again.

DIES IRÆ.

(Translated by Rev. Æneas McD. Dawson.)

Day of anger, day of dread!
The world, in fire, shall pass away:
The doom in David's and Sibylla's lay.

Oh! what fear shall then prevail,
When God shall come, the judge of man,
And all his deeds inexorable scan!

Loud shall the last trumpet sound;
Shall hear the silent grave its tone,
Shall face each startled soul the judgment throne.

Death and Nature both shall see,
Spring from the dust each creature forth,
Before the Judge severe, to plead its worth.

The doom book in Heaven writ,
Wherein the witness all is read,
Mankind to judge, that day will be outspread.

What, ah! wretched, shall I say?
What patron's aid shall I invoke?
When scarce the good shall 'scape stern justice's stroke.

Awful Thou, Heaven's Majesty!
Yet free doth Thy salvation flow;
Bid ope Thy mercy's fountain,—favor show.

Forget not, Saviour, Lord,
My guilt hath caused thy mortal life,
Give me to conquer in the final strife.

Borne for me Thy crushing load,
For me endured the Cross' pain:
Oh! be not all Thy mercy's toil in vain.

Just Thou art, avenging Judge;
Oh! yet ere dawn that awful day,
Do Thou, in pity, wipe each stain away.

Ever scourges me remorse,
Ever burns me sin's devouring shame,
I, suppliant now, Thy generous pity claim.

Thou did'st Magdalen forgive,
And heard'st the robber's humble prayer;
Me, too, (I hope in Thee) Thou'lt gracious spare.

Ah! how worthless all my vows!
Yet, for Thy bounteous, Heavenly name,
My soul Thou'lt save from Hell's eternal flame.

Ever 'mongst thy faithful few,—
Thy chosen ones,—Thy throne beside,
My place secure,—far from Thy foes divide.

Be Thine enemies abashed,
Hopeless, condemned to endless fire;
Amidst Thy saints to dwell shall I aspire.

Humble and suppliant ever,
Contrite, my soul each sin deplores;
Mine end be peace,—my treasure Heavenly stores.

Oh! that day! what tears shall flow!
When guilt-stain'd man from dust shall come.
The judgment seat around, to meet his doom.

Spare, O Lord, each sinner spare,
Thy mercy, Jesus, liberal show,
Thy blessed peace eternally bestow.

AMEN.

SCIENCE.

Leaves from Gosse's Romance of Natural History.

(Continued.)

THE VAST.

Upper California is the home of the most gigantic of vegetable productions, which form two species of a sort of Cypress, named respectively *Sequoia semperverens* and *Seq. Wellingtonia*. The latter has attained the most celebrity. "About thirty miles from Sonora, in the district of Calaveras, you come to the Stanislas river; and, following one of its tributaries that murmurs through a deep, wooded bed, you reach the Mammoth-tree Valley, which lies fifteen hundred feet above the level of the sea. In this valley you find yourself in the presence of the giants of the vegetable world; and the astonishment with which you contemplate from a distance these tower-like Coniferæ, rising far above the lofty pine-woods, is increased when on a nearer approach you become aware of their prodigious dimensions. There is a family of them, consisting of ninety members, scattered over a space of about forty acres; and the smallest and feeblest among them is not less than fifteen feet in diameter. You can scarcely believe your eyes as you look up to their crowns, which, in the most vigorous of the colossal stems, only begin at the height of a hundred and fifty or two hundred feet from the ground."

Each member of this wonderful group has received a familiar name, in many cases indicating in its homely associations the rude mind of the backwoodsman. A hotel has been built close to the group, which has become a scene of attraction to visitors from all parts of the country. An enumeration of a few of the more prominent trees, with their statistics, will enable us better to form an idea of the scene, particularly if we take the monument of London as a standard of comparison, whose total height is two hundred and two feet, and fifteen feet the diameter of the column at the pliuth.

Leaving the hotel, and proceeding into the grove, the visitor presently comes to the "Miner's Cabin," a tree measuring eighty feet in circumference, and attaining three hundred feet in height. The "cabin," or burnt cavity, measures seventeen feet across its entrance, and extends upwards of forty feet. Continuing our ramble, admiring the luxuriant growth of underwood, consisting of firs, cedars, dogwood, and hazel, we come to the "Three Graces." These splendid trees appear to grow, and perhaps do grow, from one root, and form the most beautiful group in the forest, towering side by side to the height of two hundred and ninety feet, tapering symmetrically from their base upwards. Their united circumference amounts to ninety-two feet; it is two hundred feet to the first limb on the middle tree. The "Pioneer's Cabin" next arrests our attention, rising to the height of one hundred and fifty feet (the top having been broken off), and thirty-three feet in diameter. Continuing our walk, we come to a forlorn-looking individual, having many rents in the bark, and, withal, the most shabby-looking in the forest. This is the "Old Bachelor;" it is about three hundred feet high, and sixty in circumference. The next tree is the "Mother of the Forest," presently to be mentioned as having been stripped of its bark by speculators in 1854. We are now amidst the "Family Group," and standing near the uprooted base of the "Father of the Forest." This scene is grand and beautiful beyond description. The venerable "Father" has long since bowed his head in the dust; yet how stupendous even in his ruins! He measures one hundred and twelve feet in circumference at the base, and can be traced three hundred feet, where the trunk was broken by falling against another tree. A hollow chamber, or burnt cavity, extends through the trunk two hundred feet, large enough for a person to ride through. Near its base is a spring of water. Walking upon the trunk, and looking from its uprooted base, the mind cau scarcely conceive its prodigious dimensions, while on either hand tower his giant sons and daughters. Passing onward, we meet with the "Husband and Wife," leaning affectionately towards one another; they are sixty feet in circumference, and two hundred and fifty feet in height. "Hercules," one of the most gigantic specimens in the forest, stands leaning in our path. This tree, like many others, has been burnt at the base; it is three hundred and twenty-five feet high, and ninety-seven feet in circumference. The "Hermit," rising solitary and alone, is next observed. This tree, straight and well proportioned, measures three hundred and twenty feet high, and sixty feet in circumference. Still returning towards the hotel by the lower trail, we pass the "Mother and Son," which together measure ninety-three feet in circumference; the "Mother" is three hundred and twenty, the "Son" a hopeful youth of three hundred feet. The "Siamese Twins and their Guardian" form the next group: the "Twins" have one trunk at the base, separating at the height of forty feet, each measuring three hundred feet high; the "Guardian" is eighty feet in circumference, and three hundred and twenty-five feet high. Beyond stands the "Old Maid," slighty bowing in her lonely grief; she measures sixty feet in circumference, and is two hundred and sixty feet high. Two beautiful trees, called "Addie and Mary," are the next to arrest our attention, measuring each sixty-five feet in circumference, and nearly three hundred feet high. We next reach the "Horse-back Ride," an old fallen trunk of one hundred and fifty feet in length, hollowed out by the fires which have, in days gone by, raged through the forest. The cavity is twelve feet in the clear and in the narrowest place, and a person can ride through on horseback, a distance of seventy-five feet. "Uncle Tom's Cabin" next claims our admiration, being three hundred feet high, and seventy-five in circumference. The "Cabin" has a burnt entrance of two and a half feet in diameter; the cavity within is large enough to seat fifteen persons. Two other trees we must note; one of which, named the "Pride of the Forest," remarkable for the smoothness of its bark, measures two hundred and eighty feet in height, and sixty feet in circumference. The "Burnt Cave" is also remarkable; it measures forty feet nine inches across its roots, while the cavity extends to the distance of forty feet—large enough for a horseman to ride in, and, turning round, return. We now reach the "Beauty of the Forest," a tree sixty-five feet in circumference, fully three hundred feet high, symmetrical in form, and adorned with a magnificent crest of foliage. Reaching the road, and returning to the house, we pass the "Two Guardsmen," which tower to the height of three hundred feet, and are sixty-five and seventy feet in circumference, forming an appropriate gateway to this wonderful forest.

Two of these trees have been used for the satisfaction of public curiosity at a distance from their home. One of the noblest, called the "Big Tree," was felled; a work of no small labour, since the trunk was ninety-six feet in circumference at the base, and solid

throughout. It was effected by boring holes with augers, which were then connected by means of the axe, and occupied twenty-five men for five days. But even when this was done, so accurately perpendicular was the noble column that it would not fall, and it was only by applying a wedge and strong leverage, during a heavy breeze, that its overthrow was at last effected. In falling it seemed to shake the ground like an earthquake; and its immense weight forced it into the soft virgin soil, so that it lies imbedded in a trench, and the stones and earth were hurled upward by the shock with such force that these records of the fall may be seen on the surrounding trees to the height of nearly a hundred feet. The stump was smoothed, and has been fitted up for theatrical performances and balls, affording ample room for thirty-two dancers. The bark was removed for a certain length, and being put up symmetrically, as it originally subsisted, constituted a large room, furnished with a carpet, a piano, and seats for forty persons. In this state it was exhibited in various cities of America and Europe.

So successful was this speculation, that another hero of the Barnum tribe proceeded to separate the entire bark from the "Mother of the Forest," to a height of one hundred and sixteen feet, removing it in sections, carefully marked and numbered, for future reconstruction. It is this trophy which has been exhibited in London, first in Newman Street, and afterwards at the Adelaide Gallery. These buildings, however, would not admit of the erection of the whole, so that it was removed in 1856 to the Crystal Palace, where it now delights the eyes of thousands daily.

Perhaps we can scarcely regret the removal and transport of these relics, especially as it is said the "Mother" has not been perceptibly injured in health by the abstraction of her outer garment. Yet it is a matter of congratulation that pecuniary avidity will not further diminish this noble grove, for the law has now prohibited the injury of any more trees, on any pretence whatever.

All these are the mighty works of an Almighty God; not self-produced, as some would fain assure us, by the operation of what are called eternal "laws," but designed by a Personal Intelligence, created by a Living Word, and upheld by an Active Power.

"Praise the Lord from the earth, ye dragons, and all deeps: . . . . mountains, and all hills; fruitful trees, and all cedars; beasts and all cattle; creeping things, and flying fowl! His glory is above the earth and heaven." (Ps. cxlviii.)

THE MINUTE.

If great bulk excites our admiration, so does great minuteness. He who of old wrote the Iliad within the compass of a nut-shell, might have copied the poem a hundred times over, without eliciting one puff of that gas which enabled him *hominum volitare per ora*, if he had confined himself to the ordinary scale; and the curious interest with which we gaze on a dozen spoons carved out of one cherry-stone, and enclosed in another, we should not think of bestowing on the same number of dessert spoons in the plate-basket. The excessive minuteness of the objet in question is the point to be admired, and yet not *mere* minuteness; we might see objects much smaller, atoms of dust for instance, and pass them by without a thought. There must be minuteness combined with a complexity, which, in our ordinary habit of thinking, we associate with far greater dimensions: in the one case, the number, form and order of the letters that make up the poem; in the other, the number, shape and carving of the toy-spoons.

And thus, when we look on the tiny harvest mouse, two of which scarcely weigh a halfpenny, and which brings up its large little family of eight hopeful mouselings in a nest no bigger than a cricket-ball, or the still tinier Etruscan shrew, it greatly enhances our interest to know that every essential organ is there which is in the giant rorqual of a hundred feet. The humming-bird is constructed exactly on the same model as to essentials as the condor; the little sphærodactyle, which we might put into a quill-barrel, and carry home in the waist-coat pocket, as the mighty crocodile; the mackerel-midge, which never surpasses an inch and a quater in length, as the huge basking-shark of six-and-thirty feet.

Complexity of structure, the multiplicity and variety of organs, do not depend upon actual dimensions, but rather upon the position in the great plan of organic existence which the creature in question occupies. The harvest mouse possesses a much more elaborate organisation than the vast shark or colossal snake. In general, the creatures of simple structure are minute—the *most* simple, the *most* minute; but we need to limit this proposition by many conditions and exceptions, before we shall fully apprehend the true state of the case. Ignorant exhibitors of oxyhydrogen microscopes will frequently, indeed, be heard to declare that all the specks that are seen shooting to and fro, or revolving, top-fashion, in their populous drops of water, are furnished with all the organs, tissues, and members that constitute the human frame; and similar statements were not uncommon in cheap compilations of natural history a few years ago. This has been abundantly shewn to be erroneous; but the tendency has been to run into an opposite extreme; and to assume that what are called "low forms" of organic life are exceedingly simple in their structure. There is, I say, error here; the microscope is daily revealing the fact, that in such beings the tissues that had been too hastily thought simple and almost homogeneous are really complex, and that systems of organs of the most elaborate character are present, which had been altogether overlooked and unsuspected.

What is more interesting than an examination, by means of a first-rate microscope, of a tiny atom that inhabits almost every clear ditch—the *Melicerta?* The smallest point that you could make with the finest steel-pen would be too coarse and large to represent its natural dimensions; yet it inhabits a snug little house of its own construction, which it has built up stone by stone, cementing each with perfect symmetry, and with all the skill of an accomplished mason, as it proceeded. It collects the material for its mortar, and mingles it; it collects the material for its bricks, and moulds them; and this with a precision only equalled by the skill with which it lays them when they are made. As might be supposed, with such duties to perform, the little animal is furnished with an apparatus quite unique, a set of machinery to which, if we searched through the whole range of beasts, birds, reptiles, and fishes, and then, by way of supplement, examined the five hundred thousand species of insects to boot,—we should find no parallel.

The whole apparatus is exquisitely beautiful. The head of the pellucid and colourless animal unfolds into a broad transparent disk, the edge of which is moulded into four rounded segments, not unlike the flower of the heart's-ease, supposing the fifth petal to be obsolete. The entire margin of this flower-like disk is set with fine vibratile cilia, the current produced by which runs uniformly in one direction. Thus there is a strong and rapid set of water around the edge of the disk, following all its irregularities of outline, and carrying with it the floating particles of matter, which are drawn into the stream. At every circumvolution of this current, however, as its particles arrive in succession at one particular point, viz., the great depression between the two uppermost petals, a portion of these escape from the revolving direction, and pass off in a line along the summit of the face towards the front, till they merge in a curious little cup-shaped cavity, seated on what we may call the chin.

This tiny cup is the mould in which the bricks are made, one by one, as they are wanted for use. The hemispherical interior is ciliated, and hence the contents are maintained in rapid rotation. These contents are the atoms of sedimentary and similar matter, which have been gradually accumulated in the progress of the ciliary current; and these, by the rotation within the cup becoming consolidated, probably also with the aid of a viscid secretion elaborated for the purpose, form a globular pellet, which as soon as made in deposited, by a sudden inflexion of the animal, on the edge of the tube or case, at the exact spot where it is wanted. The entire process of making and depositing a pellet occupies about three minutes.

I say nothing about the other systems of organs contained in this living atom: the arrangements destined to subserve the purposes of digestion, circulation, respiration, reproduction, locomotion, &c., though these are all more or less clearly distinguishable in the tissues of the animal, which is as translucent as glass. For the moment I ask attention only to the elaborate conformation of organs, which I have briefly described, for the special purpose of building a dwelling. No description that I could draw up, however, could convey any idea approaching to that which would be evoked by one good sight of the little creature actually at work;—a most charming spectacle, and one which, from the commonness of the animal, and its ready performance of its functions under the microscope, is very easy to be attained.

It is impossible to witness the constructive operations of the melicerta without being convinced that it possesses mental faculties, at least if we allow these to any animals below man. If, when the chinpanzee weaves together the branches of a tree to make himself a bed; when the beaver, in concert with his fellows, gnaws down the birch saplings, and collects clay to form a dam; when the martin brings together pellets of mud and arranges them under our eaves into a hollow receptacle for her eggs and young,—we do not hesitate to recognise *mind*—call it instinct, or reason, or a combination of both—how can we fail to see that in the operations of the invisible animalcule there are the workings of an immaterial principle? There must be a power to judge of the condition of its case, of the height to which it must be carried, of the time when this must be done; a will to commence and to go on, a will to leave off (for the ciliary current is entirely under control); a consciousness of the readiness of the pellet; an accurate estimate of the spot where it needs to be deposited (may I not say, also, a memory where the previous ones had been laid,

since the deposition does not go on in *regular* succession, but now and then, yet so to keep the edge tolerably uniform in height?); and a will to determine that there it shall be put. But surely these are mental powers. Yet mind animating an atom so small that your eyes strained to the utmost can only just discern the speck in the most favourable circumstances, as when you hold the glass which contains it between your eye and the light, so that the ray shall illumine the tiny form while the background is dark behind it!

It is a startling thought that there exists a world of animated beings densely peopling the elements around us, of which our senses are altogether uncognisant. For six thousand years generation after generation of *Rotifera* and *Entomostraca*, of *Infusoria* and *Protozoa* have been living and dying, under the very eyes and in the very hands of man; and, until this last century or so, he has no more suspected their existence than if "the scene of their sorrow" had been the ring of Saturn. Dr. Mantell wrote a pretty book, the secondary title of which was "A Glimpse of the Invisible World." It was a book about the Animalcules, which are revealed only by the microscope; and though it gave little original information, and some of that unsound, yet, for the time, when the microscope was in far fewer hands than it is now, it contained much to interest and much to instruct. The minutely invisible world has now become tolerably familiar to most persons of education; and thousands of eyes are almost constantly gazing on the surprising forms of animals and plants, which the microscope reveals.

The study of one particular class of these organisms, the Diatoms, has become quite a fashion, and the reunions of our microscopists are almost exclusively occupied with the names, the scientific arrangement, the forms and sculpturings of these singular objects. I have already had occasion to mention them in relation to the important part they play in the economy of creation; but it may not be amiss to devote a few words more to them, with the view to make the reader better acquainted with their general appearance.

A flat pill-box or cylindrical tin canister, which is much wider than it is deep, will give a good idea of many of the Diatoms, such as *Arachnodiscus*. The top and bottom of the box are formed by flat circular glassy plates, called valves, and the sides by a ring or hoop of similar material. Sometimes the outline of the valves (with which the hoop agrees) is oval, or oblong, or square, or triangular, instead of circular; and their surface is sometimes convex in various degrees, but the side is generally upright, or in other words, the surface of the hoop passes in a straight line from the edge of one valve, whatever its outline, to that of the other.

Here then is a box formed of pure transparent flintglass, very thin and delicate, and very brittle. The valves are marked with minute dots, which appear to be either knobs or pits; or with lines, either depressed or raised. In the beautiful *Arachnodiscus*, both of these modes of sculpturing are present. Each valve is marked with a number of most delicate lines, which radiate from a central circle of dots to the circumference; these radii are connected by a multitude of cross lines, bearing the closest resemblance to the elegant webs spun by our common geometric spiders, whence the name given to the genus; while in the spaces marked out by these reticulations there are rows of minute round dots. Altogether, the effect of this complex pattern of sculpture is most charming, and is heightened by the brilliant translucent material in which it is wrought, which, as has already been observed, is like the purest glass.

During life there is, in every individual, a small round body in the centre of the enclosed cavity, called the *nucleus*, and this is surrounded by irregular masses of yellowish substance, called the *endochrome*, the nature of which is not very clearly ascertained. The single specimen, including the two valves and the hoop, with their contents, is called a *frustule*.

The manner in which these beautiful, but most minute atoms increase, is highly curious. The pill-box-like frustule becomes deeper by the widening of the hoop, thus pushing the valves further from each other; then across the middle two membranes form, which, by and by, from the deposition of flinty matter, become glassy valves, corresponding to the two outer valves, and then the whole frustule separates between these two new valves, and forms two frustules. The old hoop (in some cases at least) falls off, or allows the hoops of the new-made frustules to slip out of it, like the inner tube out of a telescope.

Now, the separation of the frustules thus made is not always so complete, but that they remain adherent to one another, by some point of contact; and hence arises a most singular and interesting appearance often presented by these bodies. Let us suppose that the original frustule was of the shape of a brick, and that by successive acts of self-division, it has formed itself into a number, say a dozen of bricks. These, of course, are laid one on another, forming a pile; but all the individuals adhere to one another by a minute point at one corner, and the matter of adherence is sufficiently tenacious and sufficiently yielding to allow of the brick-shaped frustules moving freely apart in every point, except just the connecting angle. It is not *the same* corner that adheres all up the pile; more frequently opposite corners alternate with each other, yet not very regularly, and thus an angularly jointed chain of the little bodies is formed, which is very characteristic. In some species, in which the form is a lengthened oblong, the frustules have the faculty of sliding partially over each other, and thus the chain resembles a series of long steps.

Sometimes the frustules, perhaps of a graceful wedgelike outline, are attached at the end of long slender threads, which grow from a common point, and radiate in a beautiful fan-like manner; at other times, the frustule is of an irregular trapezoidal form, and is connected with its fellows by a short intervening band. Perhaps the most common form of all is that of an italic *f* without the terminal dots, each frustule being unconnected with others. These have the power of spontaneous motion; and it is very interesting to mark them creeping along in a vagrant, jerking manner over the field of the microscope, making no inconsiderable progress.

There are, then, several circumstances which combine to make the economy of these creatures full of interest, and give them a strong hold on our imagination.

1. Their inconceivable multitudes, and their universal distribution, especially in the waters of our globe, from the equator to the poles, or at least as near to them as man has been able to investigate, the everlasting glaciers of the icy seas being conspicuously stained with them.

2. The vast part assigned to them in the economy of creation, since, as we have seen, they not only enter largely into the composition of the solid crust of the globe, but sustain (mediately) the life of its very hugest creatures.

3. The very great variety of forms assumed by the different kinds.

4. Their marvellous elegance and beauty, consisting in their material, their shapes, and their sculpturing.

5. Their spontaneous movements, and the mystery which hangs over the manner in which these are performed, a mystery which all the perseverance of hundreds of the best microscopists has not yet been able to dissipate.

6. The power which their structure possesses of taking up the siliceous matter held in solution in the waters, and forming of it solid flint;—a process which excites our wonder and which is quite beyond our comprehension.

7. The uncertainty which attends our conclusions as to their true character. Are they animals? Are they plants? The question is still before the judges. Ehrenberg and other names of high eminence have set them down as animals, but the preponderance of modern opinion is in favour of their vegetable nature. And there are some who would fain make of them a fourth kingdom, neither animal, nor vegetable, nor mineral, but an independent group possessing affinities with all.

8. Their minute dimensions. The actual size varies exceedingly, according to the species, between one-fiftieth, and one six-thousandth of an inch, or even wider limits. Perhaps, however, we may set down as an average size for an oblong frustule, a length of one-thousandth of an inch, and a width of one-five-thousandth; that is, that if you could make a chain of them, set end to end, in contact, it would take a thousand specimens to measure an inch, while, if you made a row of them, side by side, five thousand would be required to fill the same extent.

(To be continued.)

EDUCATION

ARITHMETIC.

(Continued.)

All questions should be accompanied by drill-tests. Questions, observe, are of three kinds: FIRST, *preliminary questioning*, by which the instructor feels his way, sounds the depths of his pupil's previous knowledge, and prepares him for farther knowledge; SECOND, *instructive questioning*, by which, from the knowledge already acquired, he is led on – hand in hand with the instructor—in *helping himself*, as the educator opens up the

way and helps him on; THIRD, *examinatory questioning*, testing the general results of the *whole drill*, and what in these may be sound or defective, correct or incorrect, clear or misty.

Such questions as the following, which may be considered as coming under the *second*, and *third* mode of catechising, as answering to *probe* the pupil's knowledge of what you are teaching, as well as enabling you to throw *farther* light on the subject, when found necessary. But bear in mind, as you question, you must, to be successful, endeavour to keep his mind in a wakeful and teachable condition, earnest in self-effort.

Questions.—In changing cwt. into tons, should the number of tons be less or more than the number of cwt.?—For your answer give a reason.—How many cwt. equal a ton in weight?—Then, the number of cwt. must be lessened, and how many times?—You mean, then, that dividing lessens a number, and multiplying increases it, do you?—Ounces to lbs., divide or multiply, and why?—Pounds to cwt., divide or multiply, and why?—Ounces to cwt., multiply or divide, and give your reason?—By what steps would you do it?—At what denomination would you begin, and why?—How many steps in the work of reducing?—What denomination would each step give?—I want a certain weight in ozs., instead of qurs., how would I convert the qurs. into ozs.?

Continue such questions till your object is gained; and accompany them with encouraging hints. No discouraging hint, or word, tending to damp the learner's ardour should proceed from your lips. Educe facts, and give instructive hints, in a winning cheering on way; then your pupil or class will earnestly and cheerfully co-work with you. Thought once alive, quickened and encouraged, will go on, and ever with a certain degree of success.

Land or square measure

1 square inch = a square surface having a linear inch for each of its sides.
1 square foot = 144 square inches.
1 square yard = 9 square feet.
1 square pole = $30\frac{1}{4}$ square yards.
1 square rood = 40 square poles.
1 square acre = 4 square roods.

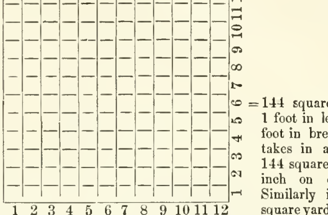
Reduced.

Inches.	Feet.	Yards.	Poles.	Roods.	
144 =	1				
1296 =	9 =	1			
39204 =	$272\frac{1}{4}$ =	$30\frac{1}{4}$ =	1		
1568160 =	10890 =	1210 =	40 =	1	
6272640 =	43560 =	4840 =	160 =	4 =	1 acre.

1. Familiarize them with both forms of the table, its different denominations, and their relative measures,—how many of one denomination *equals* another; how many times *less* one denomination is than another, &c.

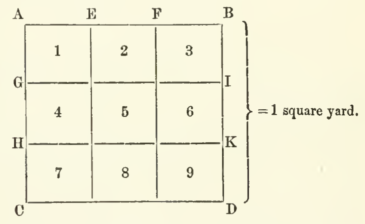
2. Then give them correct ideas of the *words* SQUARE and MEASURE. In doing this study to make your definitions square with their understanding. And as you go on with your explanations and illustrations, be sure that their understanding and yours *keep company*. Make your *starting point* sure. *Then, and not till then, are you prepared succesfully to advance.*

First explain what *measure* means, that it means to stretch out in any direction, to draw out in line; and as a noun, the distance or length taken in of an extended, or drawn out line from one point to another. Illustrate this by something which the pupil well knows, as an inch, a hand-breadth, a span, a foot, &c. To do this, use illustrative figures, as – inch; ┼┼┼┼┼┼┼┼┼┼┼┼ foot, ——┼——┼—— yard; and when these line-extents are *relatively* well understood, then explain the word *square*, as taking in the same extent in *breadth* as well as in length; using illustrative figures, as – inch; ▪ inch in length and breadth; ┼┼┼┼┼┼┼┼┼┼┼┼ (12 inches) foot, &c.



= 144 square inches, or 1 foot in length and 1 foot in breadth, which takes in a square of 144 squares,—each an inch on every side. Similarly illustrate a square yard, as follows:

Suppose A B and A C to be length yards, placed straight up and down to each other. Then by definition, A B C D is a square yard. If A E, E F, F B; A G, G H, H C = 1 lineal foot each, it appears plain from the figure that there are 9 squares in the square yard, and that each square is one square foot.



From A to B are 3 feet square; from G to I are 3 feet square; and from H to K are 3 feet square. Three threes are 9 squares, each a square foot.

3. Having made them masters of the table and illustratively to understand measure, and square measure, exercise them on reducing, changing one denomination into another; and how any denomination higher than an inch can be increased to inches, and inches decreased to it. This exercise is so much a key to other reducing exercises, that it should be considerably dwelt upon.

For verifying operations you should have three inch, six inch, twelve inch, and three foot measures, slips of wood cut to these sizes will do. On these the pupils should be so exercised as to be able to tell them all at sight. This will well prepare them for question-drill.

After exercising them on the blackboard on lengths of inches, feet, yards, &c., make themselves draw lines on their slates of inches, feet, yards: an inch, a foot, a yard up and down; and the same from left to right, or even along, and also slantingly. That is, give as much variety as you can to the exercise, even to fractional parts of inch, foot, yard, &c.

When the relative length of lines are understood, exercise them in forming them into squares of inches, feet, yards, &c. This will prepare them for more intelligently answering test-questions, and for oral and slate exercises.

Oral exercises,—lineal measure.

Feet. Inches.	Inches. Feet.	In.	Feet. Yards.	Feet.
2 × 12 = 24	36 ÷ 12 = 3	0	29 ÷ 3 = 9	2
3 × 12 = 36	48 ÷ 12 = 4	0	67 ÷ 3 = 22	1
4 × 12 = 48	70 ÷ 12 = 5	10	40 ÷ 3 = 13	1
5 × 12 = 60	80 ÷ 12 = 6	8	120 ÷ 3 = 40	

Square measure exercises.

Feet.	Inches.	Inches.	Feet.	In.	Feet.	Yds.	Feet.
2×144	$= 288$	$748 \div 144$	$= 5$	28	$588 \div 9$	$= 65$	3
3×144	$= 432$	$689 \div 144$	$= 4$	113	$844 \div 9$	$= 93$	7
4×144	$= 576$	$9456 \div 144$	$= 65$	96	$6328 \div 9$	$= 703$	1
5×144	$= 720$	$7631 \div 144$	$= 52$	143	$2173 \div 9$	$= 241$	4

Slate exercises, —square denominations.

		Inches.
1 foot	Reduce to inches	= 144
1 yard		= 1296
1 pole or perch		= 39204
1 rood		= 1568160
1 acre		= 6272640

N. B.—Reverse the processes; and question minutely on both the descending and ascending steps of the work.

Then give more complex questions, such as the following: change acres into yards; these yards into roods; and the roods into poles. Reduce inches to poles; these poles to yards; and the yards to roods. Make them give reasons for the different steps of the processes.

John Bruce,
Inspector of Schools.

(*To be continued.*)

Lecture on the Art of Questioning.

There are two classes of qualifications indispensable to make an accomplished successful teacher. First, an interest in the subjects taught, love for the work of teaching, and a true desire to promote the best interests of the learners.—To the second belong, mental vigour and flexibility, insight into character, knowledge of methods, ability to adapt them to the varied circumstances of schools, and the many nameless resources which contribute to make up tact and teaching power. The first are the moral qualities which supply the *animus* —the motive force of the instrument; the second are the intellectual and mechanical gifts by which this moral force is applied, and made to produce the desired results.—I believe the great majority of teachers under my jurisdiction, have earnestness, zeal, a strong personal conviction of the importance of the work committed to them, and a sincere interest in the welfare of the children committed to them. But it is not unfair to say—truth compels me to say, that generally they are deficient in method—method in its largest sense, and have far too little acquaintance with teaching as an art, and far too little knowledge of the varied ways, by which the principles of the art, with reference to circumstances, the stage of a child's education, the particular mould and character of his mind, his physical energy and temperament —the capability of his faculties—of the memory and the understanding especially, and how, under questioning, the mind is to be brought into play, and thus prepared for the work. Hence their resources are seldom economized, much of their time is misappropriated, well intended efforts produce little good results, and the subjects on which the pupil is questioned, are often not a little mystified,—not opened up and made plain by illustrations, and intelligent, stirring up and mind-rousing questioning.

The truth is, teachers do not sufficiently prepare themselves beforehand for the questioning part of their work. To question effectively, is as indispensable as to study the subject of questioning. And nothing can ever compensate for this neglect. No qualifications, however high, can make up for the want of the questioning art by which the master of this art ploughs up the pupil's mind—even to its subsoil—works every faculty into life—and in this quickened state pours his instruction in—and when there—works it by questioning into the very grain of his intellect.

A large and an enthusiastic army has been brought into the field; it has to be drilled, it is full of young recruits who need discipline and tactical skill; and the more these are attended to the more will its power be increased, and numerous its victories.—Our great object just now is to bring teachers more into contact—to make a general muster of all, so far as possible; and make of the whole body, if possible, a kind of permanent teacher institution, each member continuing his connection with it so long as he continues to teach. And can there be a better way to make us all one in the business of education,—to whet—to sharpen each other in our work; to form a *Fund* of the teaching art free to all. How is the general business of the country carried on? Is it not through Bank Funds by which payments from one individual to another are facilitated, and thus business is advantageously carried on and extended? We must have our Bank too—and to serve the double purpose of deposit and circulation. To the Bank-fund each member can contribute his dollar, and for which he may draw of its fullness. We shall have nothing to do with the law of percentage in its ordinary sense. Give as much or as little as you please—you are privileged to carry off the whole fund if you can. And this fund differs in toto from all monetary fund. It can never be exhausted. Drawing upon it never diminishes, it rather increases, its capital. What teacher would not wish to be thus privileged, and heartily become a drawer upon its free stock, which cannot be emptied out, so long as its capitalists prove faithful? But I fear my digression is too long; and that you are beginning to think that I have forgotten that my Lecture was to be on the art of questioning.—Oh, but I have not.—Let us now say a few words to you on this subject. It is one of great importance to every one who has made up his mind to become an educator. The success of our teaching depends more on the skill and judgment with which we put questions, than on any other single circumstance. It is an art to be *learned*, not to be talked about. But there is a science of teaching, as well as an art. Let us direct attention a little to the principles of this science, and endeavour to show, not only *how* a wise teacher should put questions, but *why* one way is better or worse than another.—Many are the objects the wise teacher has in view in questioning.—A class is before him. He questions it as a whole, and individually, feels his way, to sound the depths of his pupils' previous knowledge, to quicken attention, to ascertain at what point he should begin and what part of his class requires special attention with reference to manner, way of conveying instruction and the character of the language he should use.—The teacher's language should be level with the lowest capacity in his class.—I call these questions, *preliminary*, probing questions.—There begins the actual instruction-questions, by which the faculties of pupils are exercised, and their thoughts made to dwell upon what is imparted to them. These again are succeeded by properly examinatory questions, to test the result of the previous work, and ascertain whether his own teaching has been soundly and thoroughly worked into their minds.—Let us now enlarge a little on these three kinds of questioning.

In beginning to teach a child or class, the mind, by explanations, questions, and various suitable simple exercises, has to be prepared for receiving instruction. The educator has to find out what foundation or substratum of knowledge there is to build on, what the developed state of the mind is, what its power of conception and reflection; and how far attention can be depended on.

It is chiefly by questions judiciously put that curiosity is kindled, adesire to know something not known before, an idea of being taught is awakened. But while the mind is going through this preparatory training, great care must be taken that nothing discouraging is brought before the mind, that about your questioning there is nothing misty or hazy, but that every step of advance is made plain, every idea quickened to life, preparing it for the next—having reached the understanding. And do remember her, that as simple truths are told, explained, and suitable questions upon these put to test effects, that you are dealing with minds which as yet are small, dark and narrow, and over which as yet you have little power. Your great aim is to set the mind to work—to think with its own simple materials, and endeavour to make the whole of this preparative work interesting and suggestive, so as to prepare the pupil or class for questions on a lesson. A process so evidently necessary attains more than one end. Besides clearing the way for the lesson in hand, properly conducted, it will create an appetite for instruction, and prepare the mind for receiving it.

When the instructive questioning commences, take care you commence at the right point, and that the lesson in your own mind has it parts closely and logically connected. The outline of the questioning should precisely correspond with the plan of the lesson. Begin at the selected point—pass it not till well comprehended; and, when well understood, then take up the next part, exhaust its meaning, and thus proceed successively to the end of the lesson.—You will find it a good plan, especially with juniors, after the whole lesson has been read twice or thrice by the class, to read a short passage yourself, in a distinct impressive way, with as much expression as possible, and then to question thoroughly on the passage, exhausting its meaning before you go to the next. When this has been done with each successive portion of the lesson, the books may be closed and the whole recapitulated by way of examination. This plan serves a double purpose: it helps very much to improve the reading of the class by giving it a model of clearness and expression; and it will enable you to question systematically on every fact you teach as soon as you have taught it. By thus making sure of your ground as you proceed, you will become entitled to expert answers to your examination questions. This gives

you a kind of right to demand full answers to all your test questions, when the lesson is concluded. You will, of course, go over the ground a second time more rapidly than at first; but it is always desirable to cover the whole area of your subject in recapitulation, and to put questions to every child in the class.—This distinction may be made between the questioning of instruction and the questioning of examination. In the former the simultaneous method may be used. This gives vigour and life to a lesson, and helps to strengthen and fix the impression you wish to convey. But you must not be satisfied with simultaneous answers. They will prove misleading if not followed up by individual questioning. Our best educationists recommend that examination questions should be entirely individual.

Another, and one of the plans for training, working the minds of children by questioning, mastering what they read, and testing the results of the whole training, I shall give for your consideration. It is a plan I strongly recommend.

The entire work of drilling and examining is by much too great to be thoroughly and profitably gone through at one time; it is too much for the pupil's patience, and concentrated attention; it is too much with reference to the trainer's mind to be constantly on the stretch; and far too much as it respects efficiency in going through the work. Every part of school work requires to be done within specified divisions of time; and these you make long or short with reference to the subjects to be taught. The reading drill, with its concomitants of spelling, instructive questioning, definitions and applications of words, examinatory testing of results, &c., is too much work to do justice to any one part of it, within the portion of time of which your other work will admit, unless you race over each part hurriedly. And to do this is to make the results of your labour of little value; and if you extend your time, to enable you to do justice to each part of the work, it must be at the expense of other parts of school work; at the expense too of your class's patience and concentration of mental effort at one time; nor is long continued effort in your own favour. The teacher as well as the pupil needs breathing moments—a change in the work, and which he often needs. Momentary reliefs, passing from one kind of exercise to another helps him to make his teaching more vigorous.

What I recommend is, that only PART of the work of the reading drill be gone through at one specified time,—say the *reading part only*. Another part, namely, instructive questioning, training the class to mental effort in tracing, understanding, truths, and exercising their minds upon them; acquiring knowledge of words and their varied applications; and testing the results of the whole. should have a distinct place allotted to them in your time table.—Dictation exercises for spelling, and recapitulations, and writing outlines of lessons, I would make the concluding part of the work.—I would leave to the judgment of the teacher what places in his time table, each division of the work should have.—These divisions of the work would enable you to do more justice to each part of the training, and the general results would, to yourself, be far more satisfactory.—Let me now show how the reading drill should be gone through. The class ready for work—begin by making one in the class announce the lesson. You then, if not done before, divide the lesson into portions, of two or more sentences, as you may consider suitable. Then commence the work, first on the pronunciation of words,—how and when pauses should be made,—showing the difference between the pause for breathing, and the *one* for regulating the sense and bringing out the meaning. Put test questions, as you proceed to make the class attentive.—This being done, read before them the first portion, but only one clause at a time—to be read by them in a loud distinct voice *simultaneously* immediately after you. Let your own reading be *distinct* and *slow*, that they may be able to catch correctly your pronunciation, observe how you bring the words together in reading, to give the meaning correctly, the relative stress each word receives, and the varied tones and modulations of your voice.—On your pronouncing the *last* word of the clause, they commence reading it in unison, after your model; and, when required, re-read it till they come up to your wish. Then call on individuals to read, to ascertain their attention and the effect of your training. Then, pay special attention to pronunciation, fluency of utterance, and the toning and training of their voices.

You are here exercising them on the fundamental elements of good reading. Then, be particular and painstaking. Question, as you proceed, and make their answers to your questions be instantly followed by their DOING whatever may be necessary to show that they *practically* know the thing. Go through all the divisions of the lesson in this way. Then return to the beginning, to go over the ground a second time, but differently; for this, the first drill was a preparation.

JOHN BRUCE,
Inspector of Schools.

(*To be continued.*)

Idle Genius in School.

How doth the little busy bee
Improve each shining hour.

I AM exceedingly sensitive. Perhaps, in my old days, I am getting nervous. Nothing, at any rate, annoys me so much as in looking over the school-room to see several vacant eyes staring me in the face. It is a strong symptom that if mischief is not already brewing, there soon will be. On such occasions it is dangerous to throw your undivided energies into the class reciting, lest the urchins take advantage of your unguarded faithfulness to enjoy private theatricals in the way of low comedy or grotesque pantomime. "Eyes right" is, therefore, in our petty despotism, not a temporary order in a changing series of evolutions, but a standing requisition for the day. If those useful organs are discovered wandering, the party to whom they belong is instantly called to an account.

I notice Peter, for example, sucking his fingers, with his liquid orbs intently fastened on the master's face, waiting for the auspicious moment to hurl a wad, which he has been chewing for five minutes, at Joe's head. "What are you doing Peter?" "Nothing." "Well, as you may get into mischief, suppose you draw a map of the New England States on your slate, and show it to me before you leave the house." This trifling job keeps Peter employed for an hour, prevents his making Fort Sumters out of his neighbors' heads, prepares him for future usefulness as an engraver, and saves the poor domine the vexation of a deal of discipline which the wad might have rendered necessary. Bright pupils will some times get through with their lessons, and apparently have nothing to do. In such cases, have it understood that when employment is desired, by simply raising the hand, the ambitious mind will immediately be gratified by the teacher. Pleasantly show to the dear young hearts that unless their eyes are busy in the joyous acquisition of knowledge, Satan will soon lead them into many funny and naughty performances, for which they will shed bitter tears when they get to be old men, if not, indeed, that very morning.

To teachers troubled with lounging, restless, twisting youngsters, the plan is recommended as most efficacious. As soon as you notice the whites of the listless eyes, give as a dose the map of Asia on the slate. The prescription is perfectly safe, warranted not to injure the smallest child, being free, as the patent medicines say, from mercury and all deleterious drugs. Repeat the dose on subsequent days, until a cure is effected. In about a month your school, for application, will be the wonder of those parts.—*Illinois Teacher.*

W. W. D.

Three Rules for Good Reading.

First.—Finish each word. I use the phrase in the sense of a watchmaker or jeweller. The difference between two articles, which at a little distance look much the same, all lies in the finish. Each wheel in a watch must be thoroughly finished; and so each word in a sentence must be most completely and carefully pronounced. This will make reading both pleasant and audible. Careful pronunciation is more important than noise. Some time ago I heard a person make a speech in a large hall; he spoke distinctly, and I heard every word; unfortunately, he became warm in his subject, and spoke loudly and energetically, and immediately his speech became an inarticulate noise. Secondly.—Do not drop the voice at the end of a sentence. Simple as the rule may seem, it is one most necessary to enforce. If the whole of a sentence be audible except the conclusion, the passage read becomes discontinuous, a series of intelligible portions interspersed with blanks. Confusion, of necessity, attaches to the whole. Thirdly.—Always read from a full chest. The reading voice should always be a complete *voce di petto*; and the chest, which is truly the wind-chest of the human organ, should never be exhausted. This is as important for the speaker as the hearers, and for the hearers as for the speaker. The voice is delivered with ease, and becomes agreeable. Singers know well the importance, indeed the necessity, of taking breath at proper places. The same thing is important for reading, in a large building where attention to this matter is indispensable.—*The Dean of Ely, in the Englishman's Magazine.*

OFFICIAL NOTICES.



BOOKS APPROVED

BY THE COUNCIL OF PUBLIC INSTRUCTION, &C.

By a Resolution passed by the Council of Public Instruction for Lower Canada at its session of the 9th instant, and duly sanctioned by His Excellency the Governor General in Council, the following books have been added to those previously approved by the said Council, viz.:

1. Modern School Geography and Atlas; By James Campbell.
2. A School History of Canada and of the other British North American Provinces. With Illustrations. By J. George Hodgins. (*For Academies and Model Schools.*)
3. Traité d'Agriculture pratique; By J. F. Perrault.

At the same meeting it was resolved that the sessions of the Council shall in future be held on the second Wednesday of June and the second Wednesday of October, in each year; that should one or both of the said days fall on a *fete* or *fetes d'obligation*, the meeting shall take place on the first juridical day then ensuing, and that if there be no quorum on any of the days so appointed, the meeting shall stand adjourned to the next day.

Education Office, C. E.,
Montreal, May 31, 1865.

LOUIS GIARD,
Recording Clerk.

NOTICE TO SCHOOL COMMISSIONERS AND TRUSTEES

In pursuance of a Resolution adopted by the Council of Public Instruction for Lower Canada, on the 9th instant, and duly approved by His Excellency the Governor General in Council, notice is hereby given that from and after the 1st July, 1866, no Academy, Model School, nor Elementary School in Lower Canada, shall any longer be permitted to use other books than those approved by the said Council of Public Instruction, and that the Superintendent of Education shall be requested to refuse the grant to School Municipalities contravening this Rule.

Education Office, C. E.,
Montreal, May 31, 1865.

LOUIS GIARD,
Recording Clerk.

NOTICE TO CREDITORS

OF THE OLD SCHOOL CORPORATION OF ST. MICHEL D'YAMASKA.

Pursuant to an Order by His Excellency the Governor General in Council, the Creditors of the late School Corporation of St. Michel d'Yamaska are hereby notified to transmit to me, within THIRTY DAYS from this date, a statement of their claims with vouchers in support thereof, or accompanied with such certificates and evidence as shall be necessary to establish their validity, in order that the sum of Fifty Pounds collected from the Succession Fourquin, may be distributed among the said Creditors, with interest on said sum from the day on which it was deposited in the Bank.

Montreal, May 10, 1865.

PIERRE J. O. CHAUVEAU,
Superintendent of Education.

NOTICE TO SCHOOL COMMISSIONERS AND TRUSTEES.

School Commissioners and Trustees are requested to transmit to this Department, as in duty bound, the names of all persons elected by the Ratepayers for School purposes, whether they be elected during the month of July or at any other time. The information thus to be furnished being indispensable, the grant will be withheld from Municipalities not complying with this notice.

NOTICE TO TEACHERS.

Teachers' signatures affixed to Semi-Annual Reports should correspond with their first and family names as given by them to the Secretary of the Board of Examiners from which they obtained their diplomas, in order that those Municipalities in which they are employed may not experience any delay in receiving their allowances.

NOTICE TO DIRECTORS

OF INSTITUTIONS CLAIMING AID ON THE GRANT FOR SUPERIOR EDUCATION UNDER THE ACT 19 VICT., CAP. 54.

1st. No Institution shall be entitled to, or receive any aid unless the application therefor and the return be filed within the period prescribed, that is to say before the first day of August next. No exception will be made under any pretence whatsoever.

2nd. Acknowledgment of the receipt of such application and return will be made immediately to the party forwarding same.

3rd. Any party not receiving such acknowledgment within eight days after mailing the documents, should make inquiries at the Post Office and also at this Office, failing which, such application and return will be deemed as not having been sent in.

4th. Blank forms will be transmitted during the first fortnight in June, to all Institutions now on the list; and Institutions not receiving them during that period must apply for them at this Office.

5th. Institutions not on the list, that may be desirous of making the necessary application and return can obtain the requisite blank forms by applying for them at this Office.

Education Office (East), Montreal, May, 1865.

PIERRE J. O. CHAUVEAU,
Superintendent of Education.

APPOINTMENTS.

SCHOOL COMMISSIONERS.

His Excellency the Governor General in Council was pleased, on the 10th inst., to approve of the following appointments of School Commissioners:

County of Gaspé.—Cap Chatte: Messrs. Joseph Roy, senior, Joseph Painchaud, Jean Gagnon, Vincent Gagné and François Pelletier.

DIPLOMAS GRANTED AT LAVAL NORMAL SCHOOL.

Miss Virginie Filteau obtained a diploma for Model Schools, on the 20th March last.

March 20, 1865.

JEAN LANGEVIN, Priest,
Principal.

DIPLOMAS GRANTED BY BOARDS OF EXAMINERS.

RIMOUSKI BOARD OF EXAMINERS.

2nd Class Elementary (*F.*)—Mr. Honoré Pineau.

May 3, 1865.

L. G. DUMAS,
Secretary.

SHERBROOKE BOARD OF EXAMINERS.

2nd Class Academy (*E.*)—Mr. William E. Jordan.
1st Class Model School (*E.*)—Miss Jennie L. Hurd.
2nd Class Model School (*E.*)—Miss Clarissa J. Trenholme.
1st Class Elementary (*E.*)—Misses Emily R. Doak, Rachel S. Greenlay, Mary A. Sheppard and Ellen B. Wadleigh.
2nd Class Elementary (*E.*)—Misses Martha Addie, Annie Caffrey, Eulalie Donahue, Deborah Greenlay, Sarah S. Lindsey, Lucinda O. Rankin, Annette D. Williams; Mr. Horace Lindsey.

May 2, 1865.

S. A. HURD,
Secretary.

BOARD OF CATHOLIC EXAMINERS OF WATERLOO AND SWEETSBURGH.

1st Class Elementary (*F.*)—Miss Malvina Archambault and Miss Elisa Lamontagne.
1st Class Elementary (*E.*)—Mr. John Golden and Mr. James Kerley.
2nd Class Elementary (*F.*)—Miss Zéphirine Brunelle.
2nd Class Elementary (*E.*)—Miss Catherine McAlear and Miss Marie Geneviève McKey.

May 2, 1865.

J. F. LANGLOIS,
Secretary.

LIBRARY OF THE DEPARTMENT OF EDUCATION.

The Superintendent of Education acknowledges with thanks the following donations:

From Messrs. Ticknor & Fields, Boston: Cape Cod; By Thoreau. 1 vol., 12mo.

From Messrs. Harper & Co., New-York: Mineralogy and Geology; By Washington Hooker. 1 vol., 8vo.—The Culture of the Observing Faculties in the Family and the School; By Warren Burton. 1 vol., 12mo.—Method of Philological Study of the English Language; By Francis March, Professor in Lafayette College. 1 vol., 12mo.—Travels in Central Asia; By Arminius Vambery. 1 vol., 8vo.

JOURNAL OF EDUCATION.

MONTREAL (LOWER CANADA), MAY, 1865

Teachers' Salaries.

The Department being firmly resolved not to sanction reductions in teachers' salaries, nor to permit the closing or degrading of Model Schools, wherever these shall have been established, teachers and others interested in education are requested to notify the Department of any retrogressive action on the part of ill-advised school functionaries having in view the accomplishment of these objects. In several cases of recent occurrence the counsels of the Superintendent have had the most beneficial effect in rescuing the schools from the hands of incompetent teachers, and preventing the forfeiture of the school grant in consequence.

The School Commissioners and Trustees will also bear in mind that the cost of building or repairing schoolhouses must not be allowed to interfere with salaries; nor can any portion of the school funds be lent at interest—not even if the profit should be credited to the municipality. The cost of building and of repairs is to be defrayed by a special tax; it is *illegal* to divert the ordinary school revenue to these objects. The Government grants, together with the proceeds of the annual assessment and of monthly rates, are to be devoted exclusively to the payment of teachers' salaries and to the furnishing of schoolhouses. The purchasing of books or stationery for the use of pupils with the funds arising out of the *ordinary revenue* is illegal, unless indeed this were done on a distinct understanding that the money would be reimbursed by the parents when paying the monthly rate. THE ORDINARY REVENUE OF THE SCHOOL MUNICIPALITY IS TO BE EXPENDED IN PAYING THE TEACHERS.

In support of what we have said on former occasions as regards the futility of attempting to evade the rule requiring a three months' notice prior to the dismissal of a teacher at the expiration of his engagement, we may now mention that the School Commissioners of Repentigny have been condemned to pay a heavy indemnity to a teacher on whom a notice had been served solely with the view of bringing about a reduction in his salary.

Law to Protect Birds.

As the law recently enacted for the protection of small birds chiefly concerns the children residing in the rural districts, we beg to call the attention of teachers to its great importance. By making known its provisions, they would render a service alike to pupils and parents.

From the 1st of March to the 1st of August it is forbidden to kill birds, except birds of prey, ravens, crows, and wild pigeons. It is also forbidden to rob or destroy nests, or to set traps or snares for birds. Any person offending against these provisions is liable to a fine of TEN DOLLARS.

The principal reason for protecting birds is that by destroying insects they in reality protect the crops; to their destruction must be attributed the alarming increase in the number of insects which have proved so injurious for several years past.

School of Agriculture of Ste. Anne.

From the recently published report of the Secretary to the Board of Agriculture we glean the following particulars touching the agricultural school at St. Ann.

To the branches already taught, comprising more especially botany, natural philosophy and agricultural chemistry, were added in 1863 a course in veterinary art by Dr. Têtu, and another of law with special reference to its application in agricultural districts, by Mr. F. Deguise, N. P. The course of natural philosophy is very extended, and comprises all the branches necessary to the full elucidation of phenomena coming under the observation of the agriculturist and which it is so essential that he should understand. Under the head *agricultural chemistry* much valuable practical information is conveyed, such as that which has reference to the manufacturing of maple sugar, potash, pearlash, &c.; the properties of vegetable substances, manures and of fertilizers of all sorts; the proper distribution and rotation of crops; and drainage, with lessons in taking levels and measurements. Dr. Têtu's course has reference not only to the treatment of domestic animals and the care which should be bestowed on their housing in order to insure health and comfort, but extends also to animal physiology. The course of law by Mr. Deguise gives a clear understanding of the rights and privileges enjoyed by the cultivators of the soil and also of the obligations weighing upon them. The peculiarities of the different breeds of live stock, together with the best methods to be followed for their improvement, is a subject which, as might be expected, receives special attention, every facility, in fact, being extended to the pupils for obtaining the best possible information in this particular. The instruction imparted in the different departments of agriculture is of a thoroughly practical character, the pupils being required to take an active part in all the labors of the farm under a proper system of distribution of labor. A practical acquaintance with the use of tools, implements and machines, and with the principal operations of the farm, completes the course.

By a very simple method of book-keeping which is also taught in the school, the profits or losses resulting from any farm or stock operation may be at once determined.

The course extends over two years if the pupil on entering has a sufficient knowledge of the French language and arithmetic, otherwise it is of three years; the only conditions necessary are, 1st, a good moral character, attested by testimonials; 2nd, that the candidate be at least 16 years of age; and 3rd, capacity to read and write French, and an acquaintance with the four fundamental rules of arithmetic.

On the 13th December 1863, the Board of Agriculture, fully appreciating the usefulness of this institution, appropriated $1000 to the founding of twenty two bursaries. The result, as regards increased attendance, however, has not proved so favorable as might have been expected; still there is every reason to hope that the enterprise will prove eminently successful in the end and be the means of introducing the most approved methods of culture throughout the country.

District of Bedford Teachers' Association.

The Teachers' Association met on Thursday, May 18th, at Knowlton, and assigned the Prizes offered for Penmanship. The Association offers the same prizes for the next year in Penmanship, and also two prizes for the best maps of the District of Bedford, to be drawn by any scholar not over 16 years of age, who shall have attended the

common schools in the district at least 3 months within the year ending May 15, 1866. The maps to be drawn entirely by the scholar whose name is attached, without any tracing, and certified by the teacher. The maps and the specimens of Penmanship to be forwarded to Dr. Parmelee, Waterloo, on or before May 15, 1866.

The prizes in Penmanship awarded this year were as follows:—

Class A. Girls from 12 to 16.—First Prize, Mary Collins, Dissentient School, No. 8, Granby; second prize, J. C. Burhart, District No. 9, Potton.

Honorable Mention.—Ella L. Wells, Emeroy D. Stanton, District No. 9, Hannah Gardner, No. 4, Stanbridge; Matilda Armstrong, No. 4, Shefford; Lydia L. Kinney, No. 2, Potton; Edna D. Schoolcraft, No. 7, Clarenceville; C. E. Lincoln, Waterloo.

The number of competitors in this class was 53.

Class B. Boys from 12 to 16.—First Prize, Robt. Hackwell, Boscobel; second prize, Francis H. Perkins, Mansonville.

Honorable Mention.—Philander Young, Bansford Young, District No. 5, St. Thomas; Oscar Powell, No. 12, Bolton; Zaba Boomhower, No. 12, Stanbridge.

The number of competitors in this class was 28.

Class C. Girls under 12,—First Prize, Judith Isadore Darling, Mansonville; second prize, Mary E. Perkins, Mansonville, and Sarah A. Davis, District No. 12, Bolton, eqnal.

Honorable Mention.—Elvira H. Miller. District No. 10, Clarenceville; Adeline Vincent, Dissentient School No. 1, Bolton; Marion Gardner, District No. 4, Stanbridge; Mary E. Pell, No. 9, St Armand East; Charlotte C. Primmerman, No. 6. St. Armand West; Alice Bell, No. 10, Bolton; Katie Hackett, Dissentient School, No. 1, Milton.

The number of competitors in this class was 40.

Class D. Boys under 12.—First Prize, Charles A. Jackson, District No. 9. Brome; second prize, Frederick R. Robinson, Waterloo.

Honorable Mention.—Ephrem Baron, Dissentient School No. 1, Bolton.

The number of competitors in this class was 14.

On account of the small number of teachers present, the Association then adjourned *sine die*.

It is highly gratifying to find such a number of scholars willing to cempete for these prizes, and it is hoped that the number will be still larger at the next trial.

Jos. W. Marsh,
Sec. D. B. T. A.

Convocation of McGill University.

The adjourned meeting of Convocation was held yesterday afternoon, in the William Molson Hall of the University.

The proceedings were opened with prayer by the Rev. Canon Leach.

Mr. Baynes read the minutes of last year's adjourned meeting of Convocation, which were approved.

PRIZES, HONORS AND DEGREES TO STUDENTS IN MEDICINE.

Dr. Geo. William Campbell, M. A., Dean of the Faculty of Medicine, now gave the following statistics, respecting the Medical College, and read the subjoined list of students who passed the primary examination, and of the graduates, &c.: —

From Canada East	90
" Canada West	72
" Nova Scotia	3
" New Brunswick	1
" Prince Edward's Island	4
" Newfoundland	1
" United States	6
Total number of students	177

The number of the students who have passed their primary examination, which includes anatomy, chemistry, materia medica, institutes of medicine, and botany or zoology, is 35.

The following are the names of the students presented for the degree of M. D., C. M., their residences, and their thesis:—

Robt. C. Blair, Ha-Hay, C. E., Acute Pleurisy; E. P. Hurd, Eaton, C. E., Bright's Disease; J. C. Jones, Maitland, C. W., Scabies; M. R. Meigs, Bedford, C. E., Delirium Tremens; S. J. Bower, Kemptville, C. W., Acute Pleurisy; Stuart Crichton, Prescott, C. W., Typhus Fever; James Robertson, Georgeton, P. Ed. I., Morbus Coxarius; John B. Christie, Oxford, C. W., Pneumonia; John McVean, Montagne, C. W., Stricture of the Urethra; George C. Butler, Brighton, C. W., Diabetes Meuitus; Alfred Codd, Ottawa, C. W., Acute Bronchitis; H. W. Wood, Dunham, C. E., Injuries by Cold; James Fitzgerald, Fenelon Falls, C. W., Acute Peritonitis; Richd. T. Langrell, Ottawa, C. W., the Respiration of Plants and Animals; A. C. Godfrey, Montreal, C. E., Diphtheria; W. J. McGill McInnes, Vittoria, C. W., Diphtheria; H. L. Vorcoe, Sparta, C. W., Jaundice; Alfred Beaudet, Côteau du Lac, Syphitic Orchitis; Napoléon Mongenais, Rigaud, C. E., Lobular Pneumonia in the Adult; T. A. Dufort, St. Marks, C. E., Observations on Fractures; G. Sherk, Selkirk, C. W., Carciroma uteri; E. R. Switzer, Earnesttown, C. W., Pulmonary Tubercle; John F. Cassidy, Goderich, C. W., Chemistry, its application to Medicine; H. C. Rngg, Comptom, C. E., Inflammation; John R. Mackie, Melbourne, C. E., Chronic Valvular disease of Heart; John W. Bligh, Quebec, C. E., Digitalis Purpurea; J. C. Anderson, Sorel; C. E., Rabies and Hydrophobia; Cornelius O. R. Phelan, Montreal, Doctrine of Morbid Elements in its Theraputic application to various types of continued fever; Gilbert Prout Girdwood, Assistant Surgeon Grenadier Guards, Montreal, Arsenic; James A. Temple, Quebec, C. E. Uterine Hemorrhage; John R. Richardson, Quebec, C. E., Tobacco. Prospère Bender, Quebec, C. E. Acouitum Napellus; James T. J. Halliday, Vernonville, C. W., Circulation of the Blood in the Adult; and Charles E. Graham, Ottawa, C. W., Acute Rheumatish, have passed their examination for graduation, but not being of age cannot receive their degrees until the next convocation.

PRIZES AND HONOURS.

The Medical Faculty prizes consist, first, of the Holmes' Gold Medal, founded this session by the Faculty, in honour of the memory of their late Dean, and two prizes, in books, to the amount of $20 cash. The Holmes medal was competed for by students of the graduating class, who had passed their final examinations, and whose thesis were considered sufficiently meritorious to permit them to compete. The examinations were in writing, three questions being proposed on each of the eight branches, primary and final, the questions, if perfectly answered, amounting in the aggregate to 400 marks, 200 marks being allowed for the best thesis. Although more than a dozen thesis were considered worthy to compete, only three students competed for this honour—viz., Messrs. Hurd, Laugrell, and Rugg—and after a close competition of seven hours' duration, the medal was awarded to Mr. E. P. Hurd, of Eaton, C. E.

The prize for the best examination in the final branches was awarded to H. L. Vercoe, Sparta, C. W.; and in the primary branches. was decided between George Ross, of Montreal, C. E., and Wm. Gardner, Beauharnois, C. E.

The Professor's Prize in clinical medicine to George C. Butler, Brighton, C. W.

The prizes in natural history were awarded as follows;—

T. G. Roddick, 1st prize in botany; C. W. Kelly, 1st prize in botany; Edwin C. Ault, 2nd prize in botany; D. McDiarmid, prize in theology; and C. E. Graham, prize for the best collection of Canadian plants.

IN PRACTICAL ANATOMY—DEMONSTRATORS' PRIZES.

Senior Class—For general excellence as a practical Anatomist, for punctuallity of attendance at the class. Prize awarded to Mr. William Fuller.

Students of the second and third year's course who deserve honourable mention as good practical Anatomists—Mr. George Ross, Mr. James Hayes, and Mr. Patrick Robertson.

Junior Class—Prize awarded to Mr. Thomas G. Roddick.

Students of the first year who gave satisfaction for diligence aud attention—Messrs. Quarry, Hagarty and Reid.

The graduates in medicine now had the medical oath (in Latin) administered to them by Dr. Wright, when they were capped by Principal Dawson. At the close of the proceedings the graduates signed the register in due form, when they were presented with their degrees.

Mr. Stuart Crichton read the valedictory on behalf of the medical students. It was an able, sensible, and appropriate composition, admirable alike in conception and expression, and elicited frequent applause.

Dr. Sutherland now delivered a brief and very able address to the graduates. He said that a new chapter in the drama of their lives opened to-day, of which preceding years had been the prelude and rehearsal. The privileges and franchise of their profession now conferred implied certain qualifications on their part. Their medical studies extended over four years, and, besides, their final examination had satisfied their teachers that they were in every way competent to undertake the management of cases themselves. Those examinations evidenced that they had well spent and well applied their time. But such proficiency as they had displayed was not the only condition

requisite to success in life. They would be valued in the world by the conduct they would pursue, the good they would effect, and the position they would maintain. Society expected every one of its members to do his duty. The learned doctor pointed out that their success in life might be variable, and also the encouragements and difficulties which they might expect in their career. He also urged the necessity of continued and earnest work, without relying too much on their abilities. No matter what success they attained they should not be over-exultant, for no man could long enjoy in this life any success or any such feelings. The study of the human frame—the task which would be their lifelong duty—should create the greatest enthusiasm and give the greatest pleasure. The science with which their profession would connect them was surpassed by none. He now glanced at the laws affecting life and matter, observing upon the different relations and conditions in which it could be found, and showing how their studies would embrace questions of this kind. He spoke of the subject of health, remarking that a healthy life would best enable them to consider and treat diseases affecting human life. In the practice of their profession, they would have much to cause anxious and unplesant thonghts as well as agreeable and pleasant thoughts. They would do well however, under all circumstances, never to relax their vigilance or be thrown off their guard.

Dr. Sutherland now offered some very useful suggestions and advices with regard to the duties of a medical man, both in reference to patients and their relatives, pointing out where their sympathies and assistance should be tendered. He advised the graduates to cherish friendly feelings towards each other, to co-operate with one another and act in harmony. He also counselled them against refusing to acknowledge or disparaging superior intellect or professional skill in their fellows, urging that it was better to endeavour to rise to one's superior, than to try to lower them by detraction. As those before him had won their honours after long and faithful labour, he hoped they would wear them long; so should their *alma mater* send out her sons skilled and worthy into places unfamiliar and under strange skies, to spread abroad the honor, manhood and character which she had endeavored to preach and educate, and after the decline of years may those honors still be unsullied, that manhood irreproachable, and that character unimpeachable. (The Doctor was frequently interrupted by loud applause, which was renewed at the close.)

PRIZES AND HONOURS, AND DEGREES IN LAW.

Professor Torrance now proceeded to read the list of students in law entitled to prizes, honors and degrees, announcing that Norman William Trenholme was the gentleman who had won the gold medal first given in this Faculty, and known as the "Elizabeth Torrance Medal." The following is the list:

Thomas Page Butler, Adolphe P. Caron, Lemuel Cushing jr., Ambroise Choquet, Arthur Dansereau, Francis E. Gilman, Edward Holton, Alexander Houliston, William Robert Kenney, Richard Student Lawlor, Elisha Stiles Lyman, Emmett Hawkins Pixford, Joseph Lee Terrill, Edward Henry Trenholme, Norman William Trenholme.

STANDING OF STUDENTS IN THE RESPECTIVE CLASSES.

COMMERCIAL LAW—PROFESSOR ABBOTT.

Third Year.—1st., Norman William Trenholme; 3ad, Thos. Page Butler.

Second Year.—1st, John Alexander Bothwell; 2nd, Edwin Ruthven Johnson.

First Year.—1st, Asa Gordon; 2nd, Abel Adams.

CIVIL LAW—PROFESSOR TORRANCE.

Third Year.—1, Norman W. Trenholme; 2, Thos. Page Butler.
Second Year.—1, John A. Bothwell; 2, Richard Student Lawlor.
First Year—1, Asa Gordon; 2, Fred'k Stiles Lyman, George H. Pearce, equal.

JURISPRUDENCE AND LEGAL HISTORY—PROFESSOR LAFRENAYE.

Third Year.—1, Norman W. Trenholme; 2, Thos. Page Butler.

Second Year.—1, Christopher Beaufield Carter, John Alexander Bothwell, equal; 2, C. Alphonse Geoffrion.

First Year.—1, Alexander Edward Mitchell; 2, George Robert William Kittson, Asa Gordon, equal.

CUSTOMARY LAW AND THE LAW OF REAL ESTATE—PROFESSOR LAFLAMME.

Third Year.—1st, Norman William Trenholme; 2nd, Richard Student Lawlor, Ambroise Choquet, equal.

Second Year.—1st, John Alexander Bothwell; 2nd, C. Alphonse Geoffrion.

First Year—1st, John Rice McLaurin; 2nd, Asa Gordon.

CRIMINAL LAW—PROFESSOR CARTER.

Third Year.—1st, Norman William Trenholme; 2nd, Richard Student Lawlor, Thomas Page Butler, equal.

RANKING OF STUDENTS AS TO GENERAL PROFICIENCY.

Third Year.—1st, Norman William Trenholme, first in all the classes; Elizabeth Torrance, Gold Medal; 2nd, Thos Page Butler.

Second Year.—1st, John Alexander Bothwell, first in four classes; 2nd, C. Alphonse Geoffrion, second in two classes.

First Year—1st, Asa Gordon, first in two classes and second in two classes; 2nd, John Rice McLaurin and Alexander Edward Mitchell, equal, each first in one class.

Mr. N. W. Trenholme, who was selected to read the valedictory on behalf of the students in this faculty, read his thesis on "Marine Insurance"—an able and instructive paper—and also a brief, appropriate and well-expressed valedictory.

Professor Lafrenaye now addressed the graduates in law in French, giving them some excellent advice, congratulating them upon their success, and expressing kindly wishes for their future. His remarks were warmly applauded.

Principal Dawson now proceeded to make the announcement for next session. He said it had been customary to mention at the close of convocation a few facts supposed to be interesting to the friends of the University. In the first place, he would say that in regard to the number of students during the past session, he had not yet received complete returns from all the colleges and faculties connected with this institution. He believed, however, that the number of matriculated students in all the faculties would this year considerably exceed three hundred. We have at this meeting given degrees to seven students in Arts, and had thirty-two graduates in Medicine and fifteen in Law, making fifty-four in all. The graduating class in Arts was smaller this year than usual, but they hoped it would be much larger next year. At present, our third year's class in this faculty was large, and we expected to have several candidates for the degree in Arts from Morrin College. In fact, we hoped next year to revive the faculty of Law in the number of Arts graduates. It was a pleasure to him to find that, from year to year, candidates for some of the professions were exhibiting greater qualifications, and particularly medical students; and he had also occasion to observe, as regards the faculty of Law, that the preliminary training received in arts by a number of them, had enabled most of them to take high places in the law examinations. He regarded this not merely as shewing indications of progress and training, but also as pointing out the influence which knowledge in one faculty exerted with regard to another, and as shewing a tendency towards a state of things which he hoped yet to live to see general, and in which men who entered the professions should have passed through the course in Arts as a preparatory step. Such would be a good time for Canadian education. With regard to next year, they would find in the calendar shortly to be issued all the plans and arrangements agreed upon. The advantages this University offered could be conferred on many as well as on the few. They were prepared to take double the present number of students; and he was sorry that men who might be receiving the benefits of a University education were not enjoying them. He trusted the time was coming when every family in the land would secure for at least one of its members the advantages of a superior education, and when our students would be counted by thousands. Our number might be increased if we had the means of giving aid to poor students. Last year we spoke of something we wanted—namely, gold medals as prizes in the faculties of Law and Medicine, and we had, fortunately, got some already. Now, he wished to suggest, likewise, some of our friends able to do so, should establish bursaries for education, by which young men not able of themselves to pass through a College course, should be put in a position to do so. Bursaries of this kind would exercise an important influence in the promotion of the higher education of the country. He hoped the gentlemen who had taken degrees to-day would remember the excellent advice given them by their professors. He (Principal Dawson) would impress upon the graduates the importance of observing three things:—First, they should endeavour to give thoughtful, careful, and systematic attention to all things which it was their duty and interest to study in connection with their professions, and with the enlargement of their views generally; intellectual cultivation and the continuance of it was a most important thing to bear in mind. Second, they should endeavor, with an honest and true heart, to have regard constantly to all the duties they owed to others in life; and, lastly, as a condition for success, they should go on in life with an humble and constant reliance in God, asking for His blessing—for "that blessing with which He maketh rich, and addeth no sorrow therewith." (Loud applause.)

It appears that the number of students in Arts at this University and the Morrin College is 71; in Law 56; and in Medicine, 177.

The meeting closed with the benediction by the Rev. Professor Cornish.

Tuesday, 2nd May, 1865.

The proceedings having been opened with prayer by the Rev. Canon Leach,

Mr. Baynes, Secretary Reg, read the minutes of the last meeting of convocation, which weie approved.

FELLOWS ELECTED.

The following gentlemen were elected fellows for the ensuing year of the faculties mentioned:

ARTS.—B. Chamberlin, Esq., M.A.,B.C.L.; Robert Leach, Esq., M.A.,B.C.L.

MEDICINE.—Doctor Sutherland, and Dr. Godfrey.

LAW.—W. B. Lamb, Esq., B.C.L., and F. Torrance, Esq., B.C.L.

PRIZES AND HONORS IN ARTS.

The Rev. Canon Leach now proceeded to award the prizes and honors to students in Arts. He stated the Ann Molson Gold Medal, awarded last year to E. Duff, was not then ready and could not be presented, but it could be now, as could also that for this year won by A. Borthwick. The medals were now handed to both gentlemen.

The following list was now read by the Rev. Canon Leach, who handed the medals to the parties entitled to them:

FACULTY OF ARTS.—HONOURS AND PRIZES.

Graduating Class.

B. A. Honours in Classics.—Brewster, William—1st Rank Honours; Chapman Medal.

B. A. Honour in Natural Science.—Morrison, James; 1st Rank Honours; Logan Medal; Fowler, William, 1st Rank Honours, McOuat, Walter, 1st Rank Honours.

B. A. Honour in English Literature.—Krans, Edward H., 1st Rank Honours; Shakspeare Medal.

Third Year.

Bethune, Meredith B.—1st rank general standing; Prize in Classics; Prize in Zoology; Prize in French. McDuff, A. Ramsay, 1st rank general standing; Prize in Moral Philosophy; 2nd Prize for Collection of Plants. Brown, Aithur Adderley, 1st rank general standing; Prize in Zoology. Stewart, Colin Campbell, 1st rank general standing. Chipman, Clarence, 1st rank general standing; Prize in German. Anderson, J. De Witt, 2nd rank general standing; Prize in Classics. Wilson, John, 2nd rank general standing. Morrison, John, Prize in Hebrew. Perrigo, Jas, 1st Prize for Collection of Plants.

Passed the Sessional Examination.

Bethune, McDuff, Brown, Stewart, Chapman, Anderson, Wilson, Hart, Tabb, Perrigo, Morrison, Beckett, McLeod.

Second Year.

Holiday, Caleb (High School). 1st rank general standing. Archibald, John (Nova Scotia). 2nd rank general standing; Prize in Botany. Brown, C. E. C. (Lennoxville). 1st rank Honours in Mathematics, and Prize. Duncan, Alex., Prize in German.

First Year.

Brooke, Charles A. (Lennoxville). 1st rank general standing; Prize in Classics; Prize in English. Harler, William, (High School) 2nd rank Honours in Mathematics, and Prize; 1st rank general standing; Prize in Classics; Prize in Hebrew. Laing, Robert (Normal School), 2d rank general standing; Prize in History; Prize in English. Spong, J. J. R. (High School). Prize in Chemistry.

Passed the Sessional Examination.

Brooke, Marler, Laing, T. Wood, Spong, Mitchell, Slack, F. O. Wood.

STANDING OF STUDENTS IN THE SEVERAL CLASSES.

Logic, Mental and Moral Philosophy, and English Literature.

Ordinary B. A. Examination.—(Moral and Mental Philosophy and English Literature.)—Class 1st: Krans. Class 2nd: McOuat, Gibb, Fowler.

Third Year.—(Moral and Mental Philosophy and English Literature.) Class 1st: McDuff (prize); Browne, Wilson, Bethune and Stewart, equal. Tabb, McLeod, Morrison. Class 3rd: Haıt, Beckett.

Second Year.—(Logic). Class 1st: Archibald. Class 2nd: Holiday, Carmichael. Class 3rd: Duncan, C. E. Brown, Fraser, Foster. (English.)—Class 1st: Holiday. Class 2nd: Carmichael, Archibald and Fraser, equal. Class 3rd: Duncan, C. E. C. Brown, Foster.

First Year.—(English and Logic.)—Class 1st: Laing (prize), Brooks (prize), Thos. F. Wood, Marler. Class 2nd: Mitchell, Spong, Hindley, G. Brown. Class 3rd: Slack, F. O. Wood, Dart, Kennedy.

Honour Examinations.

B. A. Honour Examinations in English Literature.—(First Rank.) Edward H. Krans.

CLASSICS AND HISTORY.

Ordinary B. A. Examination.—(Greek.)—Class 1st: Brewster· Class 2nd: Gibb. (Latin.)—Class 1st: Brewster. Class 2nd: Gibb.

Third Year.—(Greek.)—Class 1st: Bethune (prize), Anderson, McDuff; Chipman and Wilson, equal; Browne and Stewart, equal. Class 2nd: Hart, Couit; Morrison and Perrigo, equal. Class 3rd: Tabb, Beckett. (Latin).—Class 1st: Anderson (prize); Bethune and Wilson, equal; Browne, McDuff and Stewart, equal; Chipman. Class 2nd: Hart, Court; Perrigo and Tabb, equal; Morrison. Class 3rd: McLeod, Beckett.

Second Year.—(Greek.)—Class 1st: Holiday, Archibald. Class 2nd: Fraser, Duncan, Carmichael. Class 3rd: Foster. (Latin.) Class 1st: Holiday. Class 2nd: Archibald; Duncan and Fraser, equal; Taylor, Carmichael. Class 3rd: Foster, Brown.

First Year.—(Greek.)—Class 1st: Brooks (prize), Marler. Class 2nd: T. Franklin Wood. Class 3ıd: Mitchell, Slack, Spong, Laing, Dart, Clark; Hindley and F. O. Wood, equal; Kennedy.—(Latin.)—Class 1st: Brooks and Marler (prize), equal; T. F. Wood. Class 2nd: Laing, Slack, Mitchell, Spong. Class 3rd: F. O. Wood, Clark, Dart, Kennedy.—(History of Greece.)—Class 1st: Laing (prize); Marler, Spong, Brooks, Mitchell, T. Franklin Wood. Class 2nd: Hindley and F. O. Wood, equal. Class 3rd: Clark, Dart, Baynes.

Honour Examinations.

B. A. Honours.—(First Rank.)—William Brewster.

MATHEMATICS AND NATURAL PHILOSOPHY.

Ordinary B. A. Examination.—Class 1st: James D. Morrison' Gibb. Class 2nd: none. Class 3rd: Brewster.

Third Year.—Class 1st: Bethune, McDuff, Tabb, Stewart. Class 2nd: Hart, Arthur Browne, Wilson, John Morrison, Anderson, C. Chipman. Class 3rd: Perrigo, Beckett, McLeod.

Second Year.—Class 1st: C. E. C. Brown, Holiday, Fraser. Class 2nd: Archibald, Carmichael. Class 3rd: Duncan.

First Year.—Class 1st: Brooks, Marler, Laing. Class 2nd: T. F. Wood, Mitchell, Kennedy. Class 3rd: Spong, G. Brown,* F. O. Wood, Slack, Raynes.

Honour Examinations.

Second Year.—C. E. C. Brown, 1st Rank Honours and Prize.
Fisrt Year.—William Marler, 2nd: Rank Honours and Prize.

NATURAL SCIENCE.

Ordinary B. A. Examination.—(Geology and Mineralogy.)—Class 1st: Morrison, Fowler, McOuat. Class 3rd: Gibb, Krans.

Third Year.—(Zoology.)—Class 1st: Bethune and Browne, equal (prize); McDuff (2nd prize for collection of plants); Perrigo (1st prize for collection of plants). Class 2nd: Chipman, Stewart, Beckett, Tabb. Class 3rd: McLeod and Anderson, equal; Hart, Morrison, Wilson, Court.

Second Year.—(Botany.)—Class 1st: Archibald (prize); C. E. Brown, Duncan, G. Brown.* Class 3rd: Holiday, Foster, Fraser, Hall.

First Year.—(Chemistry.)—Class 1st: G. Brown (Partial Student); Spong (prize), Laing. Class 2nd: Brook, Dart, Mitchell, Marler, Hindley. Class 3ıd: Baynes, F. Woods, T. Clark, Kennedy, Slack, F. O. Wood.

Honour Examinations.

B. A. Honours.—First Rank.—James Morrison, William Fowler, Walter McOuat.

FRENCH.

Third Year.—Advanced Course.—Class 1st: Bethune (prize). Clas. 2nd: Perrigo, McDuff, Hart. Class 3rd: Tabb. Elementary Courses—Class 1st: Browne. Class 2nd: none. Class 3rd: Wilson, McLeod.

Second Year.—Advanced Course.—Class 1st: Holiday. Class 2nd: none. Class 3ıd: none. Elementary Course.—Class 1st: Fraser, Archibald. Class 2nd: Brown, Hall. Class 3rd: none.

* Partial and Occasional Students.

GERMAN.

Third Year.—Class 1st: Chipman (prize).—Class 2nd: Anderson. Class 3rd: Court.

Second Year.—Class 1st: Duncan (prize). Class 2nd: Taylor.* Class 3rd: Foster.

HEBREW.

Senior Class.—Steward, Hart.

Intermediate Class.—Morrison (prize); Dixon.* Douglass.*

Junior Class.—Marler (prize); Jackson.* Laing, Dart, Mitchell and Spong, equal.

DEGREES IN ARTS.

The degree of B. A. was conferred upon the following graduates:—

In Honours. †

William Brewster, of Montreal; Wm. Fowler, of Montreal; Edward H. Krans, of Freligshsburgh; Walter McOuat, of Chatham; and Jas. Morrison, of Waddington, N. Y.

Ordinary.

Class 1st: None. Class 2nd: Charles Gibb, Montreal. Class 3rd: None.

McGill College.

Class 1st: Caleb Holiday. Class 2nd: John Archibald, George B. Fraser, James Carmichael. Chas. E. C. Brown, and Alexander Duncan. Class 3rd: None.

Morrin College.

Class 1st: John McKenzie. Class 2nd: John McD. Patterson. Class 3rd: Wm. S. Russell.

Edward H. Krans was the graduate selected to read the valedictory, which, both in spirit and language, did him great credit. He was frequently applauded.

The degree of M. A. was now conferred on Mr. Gilman.

Professor Johnson now addressed the graduates in brief and eloquent terms. He said that this day would be an era in their lives, the remembrance of which would not soon pass away. Among the incidents of to-day was their promise that they would endeavour to do honour to this University, and preserve its dignity. He desired to lay before them what this promise involved, and the safest way in which it might be fulfilled. The learned Professor now glanced at the high importance of the existence of Universities for both the progress and maintenance of civilization. Every university had special claims on its own graduates. Institutions of this kind were distributaries of knowledge to the community—educating the educators. The leaders in all walks of life here received their training, and those who had never been within the walls of a university had nevertheless been consciously or unconsciously influenced by the knowledge and training therein imparted. From them came the masters of all the higher schools of the country from which went out masters for the inferior schools. We thus saw how universities acted in the diffusion of knowledge and education. Then again, universities had been always the receivers, distributors, and preservers of knowledge. The learned Professor forcibly pointed out the beneficial effects of education in the different nations, observing that the origin of universities was coincident with the termination of the dark ages, and went on to show how the graduates best preserved the honor and dignity of the university, namely, by their exemplary conduct in life. He also ably commented upon the common error involved in expecting that university-bred men should know everything, and warned the graduates against tacitly or openly countenancing such an idea, as persons who did so had their ignorance of many things invariably exposed. The object of university training was chiefly to train the mind and develope all the faculties in due proportion. Another and subordinate object was to store the mind with varied knowledge. The course of studies here was calculated to impress those truths on the minds of pupils. The good effects of this training of the mind were visible in reasonableness of thought, correctness and steadiness of view, and would manifest themselves afterwards in all branches of intellectual occupation. The speaker now touched upon the vices and defects which characterised the minds of those not trained in institutions of learning, a prominent vice being over confidence and presumption. He warned the graduates of making pretence of what they did not know, or of trying to acquire a smattering of everything, advising them to acquire thoroughly that to which they applied their minds. He congratulated them on the completion of their course with such credit to themselves and satisfaction to their professors, and referred to the many blessings and advantages for which they should be grateful, particularly those of peace and prosperity, while their neighbours were suffering the horrors of war. They owed many of these blessings to being British subjects, and should ever cherish sentiments of loyalty, for which Canada had always been distinguished. They should always love our glorious constitution, under which all enjoyed equal justice, none daring to make them afraid—neither the tyrant monarch, nor the still worse tyrant mob.

The Rev. Professor Hatch, of Morrin College, now came forward and said he scarcely knew what topics to discuss on such an occasion. In the first place, however, he might congratulate Montreal on its University, of which it ought to be proud. But he lamented that the number of graduates and students was not in proportion as it should be. There were many causes which deterred young men, one of which was a doubt as to the utility of a university education, and whether the expense, labour and time expended were adequately rewarded. The rush among young men to take part in the active business of life was doubtless detrimental to learning. It was too much the custom to look on business as the end of life, and to be content to look forward to competence and a respectable position. It was also thought that the object of a university education was to fill men's heads with knowledge, which might possibly be obtained from the private study of books. The real object was not so much to give knowledge as power—to give the student ability to grasp any subject. The great element in university learning was method—to cast the student in a form and mould which could not be attained elsewhere, and made him a better and an abler man. In Morrin College there were only three Professors, yet with these and the one course to which they were limited, he believed they were doing a true work in giving students this power of grasping any subject that came before them. He trusted the time would come when McGill University would have a college in each important divison of the country, and when there would be no difference of opinion on the subject of Protestant education—and when there would be only one Protestant University in Lower Canada, thus giving degrees and raising the standard of education. In the political changes about to take place in the country, there might be dangers in the future, but if McGill University went on with her present work and continued in the right path, she might come to be regarded as a public benefactor. He believed those who had this increase of mental grasp would be the ones who would take important positions in the country, which he trusted would become bright, glorious and free.

HONORARY DEGREES

Were now conferred as follows:

Arts.—Charles F. A. Markgraf, Prof. German Language.

Laws.—T. Sterry Hunt, M. A., TRS.

Principal Dawson, who made the above announcement in terms very complimentary to the gentlemen honored, stated that the Congregational College of B. N. A. had been affiliated to McGill University during the year. They had no Theological Faculty in the University, and could not have one as at present constituted, but could have something larger and better, viz., a connection with any denomination which chose to affiliate its theological institution with the University. In this way and by this means Theological students could here receive their training in Arts which would reduce the expenses to the Theological establishment, which would only be required to maintain a Theological chair. He would like to see affiliated colleges representing all the Protestant denominations in the country. Till this occurred we could not fill the high place we might take in providing liberal education for this country. (Applause.)

Rev. Dr. Wilkes now delivered an able and eloquent address, which was frequently applauded.

A benediction having been pronounced, the proceedings were adjourned till 3 p. m. to-day.

Notices of Books and Publications.

DAWSON.—Lament for the Right Rev. James Gillis, D.D., and other Poems; By the Rev. Æneas McD. Dawson, 52 p. Ottawa, 1864.

We extract from the notes in this pamphlet the following short biographical sketch of the late Bishop Gillis, thinking it will be equally interesting to our Scotch and Franco-Canadian readers:

Bishop Gillis was virtually though not titularly Catholic Bishop of Edinburgh and the East of Scotland. He died at the age of 62. "His father was a native of the Scottish Highlands, his mother a French-Canadian; and doubtless his lineage on the mother's side, along with his early training, contributed largely to make him so much of a Frenchman as he was in appearance and manner. He was ordained priest in 1827, consecrated Bishop of Limyra in 1838, acted for several years as coadjutor of the late Bishop Carruthers, and since that greatly beloved

† The order in the Honour List does not imply relative standing.

prelate's death has acted as Vicar Apostolic of the Eastern District of Scotland. Bishop Gillis possessed great general accomplishments and a polished manner; and though very zealous for his Church, he had many friends and admirers differing widely from him in opinion. He was eminent as an orator and preacher, not only in English, but perhaps even more in French. So highly was he esteemed as a French pulpit orator, that he was lately selected by the French Bishops to preach before the Emperor the sermon at the Commemoration of Joan of Arc."

Among the other poems we notice "Tribute to the late Earl of Elgin," "St. Andrew's Day at Ottawa," "Epistle to a friend at Edingburgh descriptive of Canada," and a beautiful translation of the "Dies Iræ," which we copy in this number.

EOZOON CANADENSE.—39 p. 8vo; Montreal, 1865. Lovell.

This is a report of papers (with additions) from the *Quarterly Journal* of the Geological Society of London and the *Canadian Naturalist*, by Sir Wm. Logan and Drs. Dawson, Carpenter and Hunt on a recently discoverd species of organic remains occurring in the Laurentian rocks of Canada. It is believed that this discovery will help to modify some of the geological theories now in vogue. The articles are illustrated with a plate and several woodcuts.

MEREDITH.—Short School Time with Military or Naval Drill, in connection especially with the subject of an efficient Militia system; By E. A. Meredith, LL.D.; 8vo, 26 p.

In addition to the information contained in this valuable pamphlet, we may state that drill is a regular part of the exercises in the three Normal Schools of Lower Canada and has been generally introduced in all the Common Schools taught by teachers from the Normal Schools, several of whom are Military Instructors under the sanction of the Militia Department throughout the country. We copy the conclusion of Mr. Meredith's pamphlet:

"Drilling and volunteering have, for the last two years, been the order of the day in Canada, and most men under fifty and some over that age have been initiated in the "goose-step," and learning the mysteries of "forming fours." If from our drill experience we have learned nothing more, we must have at least learned this lesson: that soldiers are not made in a day, and that to expect to make an efficient militia by drilling men, taken from the plough or from the workshop, for three or four weeks in the year is simply absurd.

"An English statesman once designated the militia as *depositories of panic*. And the great Dryden describes the militia of his day in far from flattering terms, as

"Mouths without arms, maintained at vast expense,
In peace a charge, in war a weak defence."

If we desire to have in Canada a militia the opposite of this, a militia which will cost us little; one of which we may feel proud in peace, and upon which we may rely with confidence in time of war; a militia in a word which will recall the memories, and be ready to repeat the deeds of our ancestors in 1812, we must see that our sons, while at school, learn thoroughly their military drill. There let us instruct them in the first rudiments of the arts of war as well as peace. There let us teach them to regard it as their pride as well as their duty to be *ready*, aye *ready*, to stand forth, when the need comes, to do or die for their country. There let us imbue them with that high and noble patriotism, that spirit of intelligence and self-reliance which, aided by physical health and strength, will make them good men, good citizens, and good soldiers, the ornament at once, and best defence of their country."

STONE.—The Life and Times of Sir William Johnson, Baronet; By William L. Stone, Albany; 1865.—2 vols., 8vo., 1094 pp. With Portrait and Map.

Sir William Johnson acted an important part in the old wars of this continent in connection with the great influence which he exercised over the Iroquois. His biography will find an appropriate place in every collection of American or Canadian history.

VAMBERY.—Travel in Central Asia; By Arminius Vambery. New-York; 1865.—8vo., 493 pp. Six Plates.

We have here the strange adventures of a Hungarian, a member of the Pesth Academy. He acquired so perfect a mastery of the language and manners of Central Asia that, disguised as a Dervish, he was enabled to travel through the country without his *incognito* being suspected even by the religious communities whose outward characteristics he had assumed.

HUNT.—Canada. A Geographical, Agricultural and Mineralogical Sketch. 33 pp.—Catalogue of the Canadian Contributions to the Dublin Exhibition. 39 pp.

These pamphlets, one the work of our learned chemist and geologist, Wm. Sterry Hunt, Esq., have been published by the Minister of Agriculture and are intended for distribution at the Dublin Exhibition. The Catalogue is divided into six parts, comprising the divers products exhibited by Canada, viz., raw materials, machinery, textures, metallic products, miscellaneous manufactured articles, and objects coming under the designation of Fine Arts.

In the appendix we notice the mention of a complete collection of historical photographs by Mr. Livernois, a catalogue of books bound by Messrs. Brousseau and Desbarats, giving an insight into Canadian literature, a collection of the Journals of Education for Lower and Upper Canada, and a series of school books published by Mr. Lovell.

PERRAULT.—*Traité d'Agriculture pratique, par J. F. Perrault, ancien protonotaire, publié par J. Perrault, élève de l'École Grignon.* John Lovell, Publisher, Montreal; 1865.—18mo., 196 pp.

The above little treatise, the offspring of filial devotion, will be found practically useful. The many works on agriculture and the art of teaching published by Mr. Perrault, ancestor of the representative for Richelieu, cannot at present be readily obtained, comparatively few copies being extant. The public will therefore, we have no doubt, hail with satisfaction the appearance of the above republication, the first of a series of cheap works to be published by the same editor.

BENJAMIN.—The St. Alban's Raid, or Investigations into the charges against Lieut. Bennett H. Young and others. John Lovell, Publisher, Montreal; 1865.—8vo., 480 pp.

HODGINS.—A School History of Canada and of the other British North American Provinces; By J. S. Hodgins. John Lovell, Publisher, Montreal; 1865.—12mo., 282 pp.

An abridgment embellished with 66 maps and woodcuts and containing numerous concise statistical and chronological tables which cannot fail to be of great assistance to teachers and pupils using the work. The history of each colony is given separately, geographical sketches and statistical information being appended in each case. Short biographical notices, thrown into foot notes, occur at almost every page. The whole work has been executed with great ability and precision, and altogether reflects credit on Mr. Hodgins, who is already so well known as the author of several favorite school books.

WRIGHT.—The Life of Major General Wolfe, founded on original documents and illustrated by his correspondence; By Robert Wright. —8vo., 626 pp. London; 1865. Chapman and Hall, Publishers, $3,50.

This important work is embellished with a photograph taken from an old painting in which Wolfe has a more youthful and prepossessing air than in the portraits commonly met with. A new history of the determined efforts put forth by Great Britain to conquer Canada is quite apposite at a time when English statesmen and writers openly discuss the propriety of abandoning the colony. The author admits that the French general used every effort to put a stop to the massacre at Fort William Henry, and treats the anecdote of the farewell dinner given by Pitt to Wolfe as absurd, although supported by the authority of Lord Temple.

MONTHLY SUMMARY.

EDUCATIONAL INTELLIGENCE.

— Two bursaries of $50 each, provided by the Board of Agriculture, are open to competition for the course of agriculture in the McGill University, exempt from the sessional fee of $20 for the present session. Candidates must be at least 16 years of age, of good moral character and possessing ability to pass the Matriculation Examination in Arithmetic and English. Free scholarships, exempting from sessional fees, will also be given to students who, in addition to the above course, shall pass the Matriculation Examination in mathematics and pursue creditably the college course therein for one or two sessions. Applications will be received by the Secretary of the University until the 3rd October next when the course will commence.

— His Lordship the R. C. Bishop of Kingston and Rev. Mr. Taschereau, rector of the Laval University, arrived at Quebec by the *Peruvian*. It will be remembered that their visit to Rome had reference to the founding of a Roman Catholic University at Montreal. The decision which they have obtained is adverse to the project.

— The number of pupils in the University Normal Department of Wisconsin has been during the past term 140. It is said that Prof. Allen is to resign his connection with the University at the close of the next term. The friends of education in Wisconsin are making vigorous efforts now

for the establishment of an independent Normal School. They find it does not work well to have the Normal School an appendage of another institution, however good that may be. They are certainly right in attempting to make school-teaching a profession, and to give their teachers a thorough professional training. We know of no surer or cheaper way of attaining these results than by founding good Normal Schools.

The *Journal of Education* for April contains Hon. J. L. Pickard's parting address to the teachers of the state. The subject is, 'Avoid Extremes.' The teacher should avoid extremes in dress; in the estimate he puts upon his own ability; in the views he takes of the character of his work, and the character of his pupils; in his manner of teaching and in the matter taught; in the discipline of the school-room, and his bearing toward his pupils and patrons. The address is a fitting conclusion to Mr. Pickard's zealous labors in Wisconsin.—*Illinois Teacher.*

— The Secretary of the Board of Education in Vermont is laboring with great zeal and success in that state. His last report says the whole number of children of school age—*i. e.* between the ages of four and eighteen—is 85,795; showing an increase of 533 over 1863. Of this number 73,259 have actually attended the schools. The number of pupils between eighteen and twenty that have attended the schools is 2,765. It appears that less than one-tenth of the pupils of the state have attended any other than the public schools. The number of teachers employed during the year was 4,841. The average wages of male teachers was $20.48, of female teachers $8.16, per month. The report advocates the consolidation of all the colleges of the state.—*Massachusetts Teacher.*

— We have examined with interest the Seventeenth Annual Report upon the Common Schools of New Hampshire. The State Board of Education consists of the County Commissioners of Common Schools, appointed by the Governor and Council, and reports annually to the Legislature. The Board recommends the appointment of a State Superintendent of Schools, the establishment of a State Normal School and of Teachers' Institutes. The arguments in behalf of a State Normal School are unanswerable, and we doubt not will be heeded by the General Court.

The following is a summary of some of the leading school statistics of the state: Number of pupils four years of age and upward, attending the school not less than two weeks, 85,347; average attendance during the year, 52,550; number of children between four and fourteen not attending school anywhere, 3,470. Average monthly wages of male teachers, $24. 77; of female teachers, $15.48. Number of male teachers employed, 861: of female teachers, 3,166. Teachers unsuccessful, 154. School-houses unfit for use, 504. Average length of summer schools in weeks, 10.81; of winter schools, 10.86.—*Iowa Instructor and School Journal.*

— While the old Bay State Massachusetts takes so much interest in the cause of education in other parts of the country, and every other good thing, for that matter, still she preaches not by precept alone, but also by example. The Agent of the Board of Education, in his report, says: "No year of my service for the Board has furnished stronger evidence of the growing attachment of the people to the cause of popular education. 'Come what may, we must hold on to our schools—the source of our strength and prosperity alike in peace or war,' is the sentiment which I have every where met. This increasing interest and progress have been evinced, not only by the marked increase in appropriations, but by a better public sentiment, a more intelligent appreciation of schools; by the decline of the district system, and the consequent advancement in the gradation and classification of the schools; by the erection of improved, and in some cases costly, school-houses, and the introduction of better school furniture, in the face of war taxes and high prices; by the increase in the number of high schools, town libraries, and superintendents of schools; by the increased demand for graduates of our Normal Schools, the greater number of female teachers, and the consequent greater permanency of teachers, and adoption of wiser and milder methods of school-government; by the wider introduction of calisthenics and vocal gymnastics, and of object lessons and instruction in common things."

We extract the following statistics from the Report of the Board of Education:—

The present number of public schools	4,675
Increase for the year	49
Number of persons in the state between five and fifteen years of age May 1, 1863	241,644
Ratio of mean average attendance for the year to the whole number of persons between the ages of five and fifteen	74
Number of teachers in the summer	5,408
" " " " winter	5,476
Average length of public schools, 7 months and 19 days.	
Average wages of male teachers per month	$46.73
" " female teachers per month	19.37
Aggregate expenditure for the year on public schools, exclusive of the cost of books and school-houses	$1,679,700.24
Increase of aggregate expenditure on public schools	$112,750.76
Average expenditure for each person between five and fifteen years of age	$6.95
The whole number of students in the four Normal Schools during the year	561
Number of graduates	155

—*Illinois Teacher.*

— It would appear by a report to the French Government on the establishment of a Normal school at Algiers that there were in the colony 231 primary schools under the management of lay teachers.

LITERARY INTELLIGENCE

— The Literary Institute of St. Sauveur, Quebec, has just received through the hands of the French consul a handsome collection of books, the gift of H. I. M. the Empress of the French.

— The long vacant memberships in the French Academy have just been filled by the appointment of M. Camille Doucet, who succeeds M. Alfred de Vigny, and M. Prévost Paradol who replaces M. Ampère. The first appointed is a dramatist and the last was editor of the *Journal des Débats.*

SCIENTIFIC INTELLIGENCE.

— According to the *Canadien* there are in North America four species of butterflies whose larvæ produce silk that may be turned to account in manufactures; they are the *Cecropia*, *Luna*, *Polyphemus*, and *Promethea.* Of the three first, which are all found in Lower Canada, the *Polyphemus* is the most common. It feeds on the leaves of the oak, white birch and other forest trees, and can resist the severest cold of winter. Towards the end of summer the moth of this species weaves its cocoon and passes into the chrysalid form, only emerging from its retreat as a perfect insect during the first warm days of the succeeding summer. It is a beautiful nocturnal butterfly, resplendent with colors the most varied and striking.

NECROLOGICAL INTELLIGENCE.

—The late Mr. Lincoln was born in a part of Hardin county, Ky., which is now included in Laura county, February 12, 1809. His ancestors, who were Quakers, went from Berks county, Penn., to Rockingham county, Va., and from thence his grandfather, Abraham, removed with his family to Kentucky about 1782, and was killed by Indians in 1784. Thomas Lincoln, the father of Abraham, was born in Virginia, and in 1806 married Nancy Hanks, also a Virginian. In 1816 he removed with his family to what is now Spencer county, Ind., where Abraham, being large for his age, was put to work with an axe to assist in clearing away the forest, and for the next ten years was mostly occupied in hard labour on his father's farm. He went to school at intervals, amounting in the aggregate to about a year, which was all the school education he ever received. At the age of nineteen he made a trip to New Orleans as a hired hand upon a flat boat. In March, 1830, he removed with his father from Indiana, and settled in Macon county, Ill., where he helped to build a log cabin for the family home, and to make enough rails to fence ten acres of land. In the following year he hired himself at $12 a month to assist in building a flat boat, and afterwards in taking the boat to New Orleans. On his return from this voyage his employer put him in charge as a clerk of a store and mill at New Salem, then in Sangamon, now in Monard county, Ill. On the breaking out of the Black Hawk war in 1832, he joined a volunteer company, and to his surprise was elected captain of it, a promotion which he says, gave him more pleasure than any subsequent success in life. He served for three months in the campaign and on his return was in the same year nominated a Whig candidate for the legislature. He next opened a country store, which was not prosperous, was appointed postmaster of New Salem, and now began to study law by borrowing from a neighboring lawyer books in the evening and returning them in the morning. The surveyor of Sangamon county offering to depute to him that portion of his work which was in his part of the country, Mr. Lincoln procured a compass and chain and a treatise on surveying, and did the work. In 1834 he was elected to the legislature, and was re-elected in 1836, 1838, and 1840. In 1836 he obtained a license to practise law, and in April, 1836, removed to Springfield, and opened an office in partnership with Major John F. Stuart. He rose rapidly to distinction in his profession, and was especially eminent as an advocate in jury trials. He did not, however, withdraw from politics, but continued for many years a prominent leader of the Whig party in Illinois. He was presidential elector in behalf of Henry Clay. In 1836 he was elected a representative in Congress from the central district of Illinois, and took his seat on the first Monday in December, 1847. On Jan. 16, 1849, he offered to the House a scheme for abolishing slavery in the District by compensating the slave owners from the treasury of the United States, provided a majority of citizens of the district should vote for the acceptance of the proposed act. He opposed the annexation of Texas, but voted for the loan bill to enable the government to defray the expenses of the Mexican war. He was a member of the whig national convention of 1848, and advocated the nomination of Gen. Taylor. After the expiration of his congressional term Mr. Lincoln applied himself to his profession till the repeal of the Missouri Compromise called him again into the political arena. At the republican national convention in 1856, by which Col. Fremont was nominated for president, the Illinois delegation ineffectually urged Mr. Lincoln's nomination for the vice-presidency. On June 2, 1858, the republican State convention met at Springfield, and unanimously nominated him as candidate for U. S. senator in opposition to Mr. Douglas. The two candidates convassed the state together, speaking

on the same day at the same place. The debate was conducted with eminent ability on both sides, and excited universal interest. Mr. Lincoln had a majority of more than 4,000 on the popular vote over Mr. Douglas; but the latter was elected senator by the legislature. On May 16, 1860 the republican national convention met at Chicago, and on May 18 began to ballot for a candidate for president. On the first ballot Mr. Seward received 173½; Mr. Lincoln 102, Mr. Cameron 50½, and Mr. Bates 48. On the second ballot Mr. Seward had 184½, and Mr. Lincoln 181. On the third ballot Mr. Lincoln had 354 and Mr. Seward 110½. Mr. Lincoln was subsequently elected President of the United States and served his term of four years, when he was elected in opposition to Gen. McClellan. His career since his first election is so well known that we need not enlarge upon it. His tragical death in Ford's Theatre, Washington, might well form an era in the history of the American Republic.—*J. of Ed. U. C.*

— Dunbar Ross, Esquire, died at his residence in Quebec on the 16th instant. Mr. Ross was one of the leading politicians of Lower Canada and a distinguished member of the Quebec bar. He was born at Clonakilty, county of Cork Ireland, about the beginning of the present century. He was therefore about, but rather above, sixty five years of age. His birth at the place above mentioned was accidental, his family being Scotch. He came to Canada about 1819, and was at first engaged in mercantile pursuits. In 1829, he entered the office of the Prothonotary at Quebec, and was admitted to the bar in 1835. We believe that one of the circumstances that brought him into notice was his having been appointed judge *ad hoc* in the Court of Admiralty in a case in which the Hon. H. Black was disqualified to sit, and having rendered a very elaborate judgment in that important matter. This was in 1845. Mr. Ross who had sided with the Lower Canada minority previous to the Union of the Provinces at that time threw in his lot with the majority and shared the political fortunes of the Hon. T. C. Aylwin whose professional partner he was for some time. He successively represented the counties of Megantic and of Beauce in the Provincial Parliament. He was appointed Solicitor General in 1853, a position which he held during the space of four years.

Mr. Ross was an able and industrious lawyer, but was not generally successful as a parliamentary debater. He was a good scholar and a forcible writer. We have from him several pamphlets and contributions to the political press, among which are *Letter on the* " crise" *Metcalfe* by Zeno, 1847. "The Seat of Government" in 1847, and a second edition (enlarged) of the same in 1856. These two pamphlets contain an able and we would even say irrefutable argument in favour of Quebec as the seat of government. Mr. Ross also translated from the French the "Manifesto" of the Quebec Reform Committee in 1847. He leaves an unpublished pamphlet on Slavery. He was an active and energetic man, honorable and independent, standing fast by his friends and not a little obnoxious to his adversaries. He had been for a long time in a helpless state from a stroke of paralysis. He dies poor and respected by all. When he left the government he refused through motives of delicacy a puisne judgeship which he was offered by his political friends.

— The late Richard Cobden was the son of a Sussex farmer, where he was born June 3, 1804. Having learned the business of a salesman in the service of a City warehouse in the Manchester trade, he early removing to Lancashire, set up there for himself as a printer of calicoes, and, by his skill in suiting the markets and by his fine taste in patterns, became, in a very few years, one of the most thriving manufacturers of that district. He was still a young man. He had made up for the want of a University education by his studies of political economy, which he recommended in after-life as providing a better intellectual exercise and discipline than the exact sciences. His accomplishments were, an excellent faculty of logical exposition, with a rare talent of finding the readiest and happiest illustrations of his argument, and a perfect mastery of clear and forcible language in writing or speaking. He was familiar with the condition of the industrious middle and lower classes of England, both north and south. Foreign trade and foreign travel soon made him acquainted with the different countries of Europe and the United States. His political opinions were early formed. His task was to become one of the leading political executors of that legacy of economic science which the Scottish philosophers of the last century had bequeathed. The laws which regulate the production, distribution, and consumption of wealth appeared to his mind as the laws of bodily health—laws of Nature, ordinances of Divine authority—which it was no less impious than foolish to withstand. He took up, therefore, the vindication of those principles, almost with the zeal of an apostle, and for the sake of truth, while he demanded their practical observance for the relief of manufacturing interests. Such were the antecedents of this eminent public man, who came forward a quarter of a century ago as the ablest orator of the Anti-Corn Law League, himself a capitalist, a large employer of labor, and a successful mercantile adventurer, who could speak with sure knowledge of the operations of industry and trade.

In the House of Commons Cobden was an earnest advocate for Free Trade, because of its necessity to the working men of England. The question became, in some of its aspects, so ominous that further resistance to the popular demands might have resulted in a national calamity. Not only had Lancashire made up its mind, not only had the merchants and traders of London, after long hesitation, become thoroughly convinced upon the subject—not only were the ranks of the Anti-Corn Law League swelled daily by fresh recruits, but in the agricultural counties themselves there were torch-light meetings of laborers, who declared that, come what might of Free Trade, Protection was not even giving them bread. Sir Robert Peel saw that the time for concession had arrived; he had long been inclining in theory toward the change, and his essentially practical mind now perceived that, whatever might happen to his party or himself, Free Trade must become the law of the land. On the 26th June, 1846, the Corn Law Repeal Bill received the Royal assent; and the great Minister, as he finally retired from office amidst the blessings of a people and the curses of a faction, owned that to Richard Cobden was the chief meed of merit due. A great mark of public favor was conferred upon him by his country men. His fortune had suffered by his devotion to politics, and a splendid subscription of £60,000 was raised by his admirers, with which he purchased an estate near his native town. Shortly afterward he retired altogether from public life. His health was shattered, and it was hoped that repose might restore him—a hope that was entertained until almost the last day. In April, 1859, without any solicitation of his own, the electors of Rochdale recalled him to public life, and his return to the House of Commons was welcomed by men of all parties. Nor was it long before he again had it in his power to confer a superb service upon the country. In the autumn of the same year he concluded the Commercial Treaty with France; and, however opinions may have differed as to some details of that great agreement, there was no doubt that the illustrious free-trader had added another to his many claims upon public gratitude. The negotiation of the Treaty, indeed, may be regarded as the crowning act of his political life. The very earnestness with which he had maintained certain rather unpopular items of his creed had always excluded him from office. He had many sorrows and afflictions, of which the public were scarcely cognizant; and he found his chief reward in the sense of duty performed. He began to speak less frequently in Parliament. His last great speech was delivered in the memorable Danish debate of 1864; and it sufficiently proved that he had lost very little of his trenchant vigor or of his uncompromising love for truth. What Peel said of Palmerston, even Palmerston's more recent antagonists might have said of Cobden, "We are all proud of him." He was still sanguine of recovery, it is said; he made sure that a few days of warm weather would restore him to health; but the days of warm weather did not come; he gradually grew worse, and at a quarter past eleven on Sunday morning, April 2, at the age of sixty-one, he expired. The immediate cause of his death is said to have been bronchitis.

MISCELLANEOUS INTELLIGENCE.

— The King of Italy has appointed a commission to revise the laws affecting the literary and artistic interests of his kingdom. Manzoni and Verdi will take a part in the labor of revision.

— Some interesting statistics as to geographical distribution of health and disease have been published. According to these the chances of longevity are greatly in favour of the more northerly latitudes. Near the top of the scale are Norway, Sweden and parts of England. Of cities, Vienna stands the lowest, and the highest is London. A cool or cold climate near the sea is the most favorable for longevity. While formerly one out of every thirty of the population of England, France, and Germany died in each year, now the average is one in forty-five. The chances of life in England have nearly doubled within eight years.—*J. of E. for U. C.*

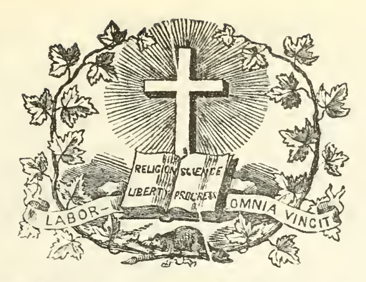
— The Queen with her natural kindness of heart is concerned at the large number of accidents which have taken place on railway lines centring in London, and has written a letter addressed to the directors of those companies. Her Majesty's remarks will apply with almost equal force to railways in this country. It may be that some of the deplorable accidents happening in this country are the result of carelessness, and it behoves the managers of railways and those in charge of the running of trains to use the utmost caution and diligence. Particularly at this season of the year, and for the next three months is extra care absolutely necessary. The number of track-men should be increased, and made to keep a sharp lookout for broken rails. The Queen's letter is as follows:—

"Sir Charles Phipps has received the commands of Her Majesty the Queen to call the attention of the directors of the———to the increasing number of accidents which have lately occurred upon different lines of railroad, and to express Her Majesty's warmest hope that the directors of the———will carefully consider every means of guarding against these misfortunes, which are not at all the necessary accompaniments of railway travelling.

"It is not for her own safety that the Queen has wished to provide in thus calling the attention of the company to the late disasters. Her Majesty is aware that when she travels extraordinary precautions are taken; but it is on account of her family, of those travelling upon her service, and of her people generally, that she expresses the hope that the same security may be insured for all as is so carefully provided for herself.

"The Queen hopes it is unnecessary for her to recall to the recollection of the railway directors the heavy responsibility which they have assumed since they have succeeded in securing the monopoly of the means of travelling of almost the entire population of the country. Osborne, Dec. 27, 1864."—*I*.

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LITERATURE.

POETRY.

(Written for the Journal of Education).

A CHILD'S TREASURES.

BY MRS. LEPROHON.

Thou art home at last, my darling one,
Flushed and tired with thy play,
From morning dawn until setting sun
Hast thou been at sport away;
And thy steps are weary—hot thy brow,
Yet thine eyes with joy are bright;
Ah! I read the riddle, show me now
The treasures thou graspest tight.

A pretty pebble—a tiny shell,
A feather by wild bird cast;
Gay flowers gathered in forest dell,
Already withering fast;
Four speckled eggs in a tiny nest,
Thy last and thy greatest prize,
Such the things that fill with joy thy breast,
And laughing light thine eyes.

Well, child, what right have I to smile
And whisper, too dearly bought
By wand'ring many a weary mile—
Dust, heat and toilsome thought;
For we children of maturer years
Task aching heart and brain,
Waste yearning hopes and anxious fears
Upon baubles just as vain.

For empty title, ribbon or star,
For worshipped and much sought gold,
How men will struggle at home—afar—
And suffer toils untold;
Plodding their narrow, earth-bound way
'Mid care and restless strife,
Wasting, ah! more than one short day,
Losing an entire life!

And thou, fair child, with to-morrow's dawn
Wilt rise again, calm—glad—
To cull wild flowers, mid wood and lawn,
Untroubled by feeling sad.
But, alas! the worldly wise of earth,
When life's last bonds are riven,
Will find that for things of meanest worth,
They've lost both Life and Heaven.

THE INFANT'S DREAM.

O cradle me on thy knee, mamma,
And sing me the holy strain
That soothed me last, as you fondly press'd
My glowing cheek to your soft white breast;
For I saw a scene, while I slumbered last,
That I fain would see again, mamma,
That I fain would see again.

And smile as you then did smile, mamma,
And weep as you then did weep;
Then fix on me thy glistening eye,
And gaze, and gaze, till the tear be dry;
Then rock me gently, and sing and sigh,
Till you lull me fast asleep, mamma;
Till you lull me fast asleep.

For I dreamed a heavenly dream, mamma,
While slumbering on thy knee,
And I lived in a land where forms divine,
In kingdoms of glory eternally shine,
And the world I would give, if the world were mine,
Again that land to see, mamma;
Again that land to see.

I fancied we roamed in a wood, mamma,
And we rested under a bough;
When near me a butterfly flaunted in pride,
And I chased it away through the forest wide;
But the night came on, I had lost my guide,
And I knew not what to do, mamma;
And I knew not what to do.

My heart grew sick with fear, mamma,
And loudly I wept for thee;
But a white-robed maiden appeared in the air,
And she flung back the curls of her golden hair,
And she kissed me softly ere I was aware,
Saying, "Come, pretty babe, with me," mamma;
Saying, "Come, pretty babe, with me,"

My tears and fears she quelled, mamma,
And she led me far away;
We entered the door of a dark, dark tomb,
And passed through a long, long vault of gloom,
Then opened our eyes in a land of bloom,
And a sky of endless day, mamma;
And a sky of endless day.

And heavenly forms were there, mamma,
And lovely cherubs bright;
They smiled when they saw me, but I was amazed,
And, wondering, around me gazed, and gazed,
While songs were heard, and sunny robes blazed,
All glorious in the land of light, mamma;
All glorious in the land of light.

But soon came a shining throng, mamma,
Of white-winged babes to me;
Their eyes looked love, and their sweet lips smiled,
For they marvelled to meet with an earth-born child,
And they gloried that I from the earth was exiled,
Saying, "Here ever bless'd shalt thou be, pretty babe;
Oh! here ever bless'd shalt thou be."

Then I mixed with the heavenly throng, mamma:
With seraphim and cherubim fair;
And I saw, as I roamed in the regions of peace,
The spirits who had gone from this world of distress,
And their's were the joys no tongue can express;
For they knew no sorrow there, mamma;
For they knew no sorrow there.

Do you mind when sister Jane, mamma,
Lay dead—short time agone;
And you gazed on the sad but lovely wreck
With a full flood of woe that you could not check,
And your heart was so sore that you wished it would break?
But it lived, and you aye sobbed on, mamma;
But it lived, and you aye sobbed on.

But oh, had you been with me, mamma,
In the realms unknown to care,
And seen what I saw, you ne'er had cried,
Tho' they buried pretty Jane in the grave when she died;
For, shining with the blest, and adorned like a bride,
My sister Jane was there, mamma;
Sweet sister Jane was there.

Do you mind of the poor old man, mamma,
Who came lately to our door,
When the night was dark and the tempest loud?
Oh! his heart was meek, but his soul was proud,
And his ragged old mantle served for his shroud
Ere the midnight watch was o'er, mamma;
Ere the midnight watch war o'er.

And think what a weight of woe, mamma,
Made heavy each long drawn sigh;
As the good man sat on papa's old chair,
While the rain dripped down from his thin grey hair,
As fast as the big tear of speechless care,
Ran down from his glazing eye, mamma;
Ran down from his glazing eye.

And think what a heavenward look, mamma,
Flashed through each trembling tear,
As he told how he went to the Baron's stronghold,
Saying, "Oh! let me in, for the night is cold."
But the rich man cried, "Go sleep on the wold,
For we shield no beggars here, old man,
For we shield no beggars here."

Well, he was in glory, too, mamma,
As happy as the blest can be;
He needed no alms in the mansion of light,
For he mixed with the patriarchs, clothed in white,
And there was not a seraph had a crown more bright,
Or a costlier robe than he, mamma,
Or a costlier robe than he.

Now sing, for I fain would sleep, mamma,
And dream as I dreamed before;
For sound was my slumber, and sweet was my rest,
While my spirit in the kingdom of life was a guest;
And the heart that has throbbed in the climes of the blest
Can love this world no more, mamma;
Can love this world no more.

Exchange Paper.

EDUCATION.

Lecture on the Art of Questioning.

(*Concluded.*)

You begin by reading before them, and at once, the whole of the first marked off portion. Read slowly, and as distinctly as possible, as a model to them—they immediately, and in *concert*, marching from clause to clause after your model-reading. Repeat the reading, if required, and question till your *object is attained*. To test *individual* attention, call on a few to read, each by himself. Let your *eye* tell who these should be. Let faults or inaccuracies of any kind be corrected by RE-READING, not by merely naming or pointing them out. Neglect not questioning if you have any doubt about anything, or wish to deepen impressions. Go successively over the divisions of the lesson in this way, and you will seldom fail to get the lesson correctly read.—As a finish—go over the ground a *third* time with them—you dispense with the simultaneous reading this time; nor do you read before them. You have trained—you now *test results*. *Each* reads a portion as you direct; and the rest of the class and yourself act the critic—pointing out faults—these to be corrected by *re-reading*. Never allow a reader to be interrupted when reading; give him every chance to do his best. Make remarks, and name mistakes to be corrected, by again reading, after he has read.—You may make them, in turn, read from the top to the foot, or from the foot to the top of the class; or, to check inattention, let none know his turn to read, or his portion, till called on to read; or, to create emulation and a little rivalry, give the same portion to two, or even more, to see who will give the best reading; or fairly to test individual preparation and skill, on given portions, let each have his portion before beginning to read. This gives each a chance to do his best; or the class may be thrown into two divisions for mastery—to see which division will have the greater number of good readers. But the teacher should be the best judge in this matter. The plan of one day may not be the most suitable the next day.

Let us now direct attention to the next division of the work. This division of the work does not suppose reading. It is understood that the finishing part of the training on reading included, as far as the standing of the class admitted, the qualities of good reading — as purity of utterance; distinctness of utterance; correctness of accent; the relative significance of words; special emphasis; correctness of pitch; voice modulation; fluency, &c., &c.

When, in the routine of work, the same class is again called up, to go through the next laid off division of the lesson, it is for a mind intellectualizing drill; and as it is the most important part of the work, it demands the greatest attention. The teacher *himself* must be prepared for it. This knowledge of the truths, facts, &c., contained therein, must be adequate. Wanting this knowledge, the time allotted for this part of the work is in danger of being taken up by a certain amount of talk only.

The first thing to be done is to work into their minds a clear, broad outline of the subject of the lesson—setting before the class as much of the subject of the lesson as is useful for them to know, and level to their understanding.—This may be interestingly done by a series of questions—leading them on from one idea to another, to the end of the lesson, and then making them repeat successively the different statements of the lesson, till their minds have *connectedly* got hold on them. Then, train them to reason on the most suitable and useful statements, and accustom them to methodize the knowledge with which you are storing their minds, and exercise them in expressing their ideas in proper language. The ability to define their thoughts, and to express them in a clear, orderly manner, may be taken as a good test of the results of your training.

The meaning of words and their application must form a special

part of the training. Not only must their meanings, as used in the lesson, be attended to: their varied applications must also receive attention. Exercising scholars on the *application* is far too little attended to in our schools; and yet, this is the most IMPORTANT part of the WORD-DRILL. This part of the drill, to be of interesting and practical value, should be very much extended.—Their meanings in the passage or lesson read, should first be attended to; then, the most marked distinctions in their varied uses; then, their analyzing them—reducing them to their simplest elements, so far as we can; then, showing how the radix, primitive, or base part of words are modified, changed in their meaning, lessened or increased in their significance by prefixes, affixes, or a modifying of the root *itself*, or depart altogether in the history of their uses, from their antecedent uses; and then, fully exercising them on their different applications, making the pupils give both orally, and in writing sentences, their own construction, embodying selected words. And if this exercise were well followed up, its effects on this part of the scholar's education would be much more beneficial, show far more developing power and mastery of words in their multifarious uses, and varied forms, then the dry etymological and mere defining exercise, which I consider as a mere starting point.—This part of the work to be finished by testing the *results* of the whole, by a series of suitable, searching questions.

The third division of the work, to be gone over at a *different* time, should include spelling exercises on slates, recapitulations of lesson, outline exercise, various paraphrasing of words, clauses, sentences, &c., and such other exercises as will fairly test the general results of drill. And, I pray you, never trust to a PUBLIC EXAMINATION to TEST teaching and training effects. Too often these are mere surface exhibitions, got up for a purpose.—The true testing of progress is that kind of questioning which reaches the very heart of your instructions. There must be in it a *microscopic* as well as *telescopic*, searching and exploring—a digging deep and a searching deep, as well as the expansive exploring of far off starry principles.—School hours, and your labours, have something, and many things, in them too precious to suffer any part of either time or labor to be lost or attended with no good result.

I now proceed to say something more special about questioning.—Questioning serves many purposes. Indeed, the subject of questioning opens up—embraces the whole field of educating, training the mind. Its three leading purposes, as I have already said, are to prepare the student's mind for receiving instruction; then, to intelligently communicating—leading on the pupil by question and answer, to work his own mind to educate itself, gather knowledge, test as he gets, and search for more, and, again, to search out results.—To MASTER the art of questioning, no educator can. But like every other teaching and training qualification, it has its degrees.—The language, style and character of questions should be the educator's daily study. Respecting these I give the following hints:

1. First, study a command of words—words the most suitable for scholars in every step of their education.

2. Secondly, cultivate great simplicity of language.

3. Thirdly, study brevity. Use as many words as are sufficient to make the question clear, and no more.

4. Fourthly, in instructive questioning, tell little in your question. Do not lead them too *directly* to the fact, or thing you wish themselves to find out. But make the way, by which with a little effort on their own part, they may find it out, sufficiently plain.

5. Fifthly, questions should be definite and unmistakable—admitting of but *one answer*.

6. Sixthly, avoid vague, wide, ambiguous questioning—so common among teachers.

7. Seventhly, avoid prompting—giving them words, just leading them to the answer wanted.

8. The next thing I wish you to attend to is, never be satisfied with single words—as, yes, no,—it is; it is not, &c., for answers. From such answers, how can you know that the answer comes from an exercised mind—a mind exercised on the thing demanded by the question? Children can and do often give the word which suffices to answer their teacher's enquiry, and are yet ignorant of the whole statement of which that word forms a part.

9. Again test their answers, to satisfy yourself that they are not mere guesses.

10. Vary the form of the question; and come on them from different points, in trying their knowledge on the same thing.

11. In your advanced classes be not satisfied until you get *entire sentences* for answers. It is worth while often to turn round sharply on inattentive pupils, or who have given mechanical answers, with the question:—"What have we just said?"—"Tell me the question, and how the answer agrees with it."

12. When testing their knowledge—but at the same time giving fair play—a chance correctly to answer—to tell what they really know, proceed as follows: put the questions distinctly, and in a clear, brief way; make the class repeat your question *verbatim, simultaneously*. Then, say—*think*—for a moment—answer.—Repeating the question after you simultaneously, enables you to ascertain if they have *all* got hold on the question allowing a moment to think; gives them time to collect and arrange their ideas on the thing demanded. You must deal with your pupils, when under a *testing* examination, *fairly and honestly*, and convince them that you wish to take no advantage of any.

13. Be sure that every one in the class understands both question and answer *well* before another question is put. And when there is any doubt about their understanding well, even correct answers, pass it not, till by repetitions and cross questioning, the doubt is removed. Class questioning has this particular object in view—that it must act upon the whole class together.

14. Question, till you get them to answer individually as readily and correctly as simultaneously.

15. Encourage *mutual questioning*, by setting the children to question one another in turn on the subject of the lesson. This practice tends greatly to strengthen their minds and their intelligence, and sharpen the intellect.

16. Teach them how to convert portions of their lesson into questions and answers. This exercise has an excellent effect upon their minds. It excites and keeps awake attention, it cultivates in them a habit of research—working their own minds on subjects—and also of rivalry and emulation. This exercise and mutual questioning, persevered in, prepare them more than any other I know for the sifting questions of the teacher.

17. Animation should characterise the whole work of questioning. Question and answer become lively and attractive, when they are *extempore* and illustrated by a a quick fancy, a well stored mind, a masterly knowledge of the subject, and a good text-book.

18. Lastly, plan well every part of your questioning work, that no part may be done at hazard or by a chance impulse, and that none be out of place—the whole forming a well connected chain, every link of which is in its right place, properly connected.

There is no plan which tends more to clear the understanding of a subject, to work it into the memory and permanently to remember, as questioning well and skilfully employed. It is better than the ablest lecturing; for it implies something more than listening, something more than mere reading. It exercises thought. When we instruct children by conversing with them on a certain topic, we cannot retain their attention. The words which we use may be the fittest and the best chosen, but we cannot be sure that their minds have been reached, or, even that they are giving heed to what we are saying; but by questioning we can secure the former in some measure, and ascertain the latter beyond any doubt. The thoughts are almost of necessity drawn out and set at work; and if an answer is made with any meaning, it must be the result of some consideration, which is an important step gained. If their answers have not much meaning, it is our duty to turn it to the best account; if wide of the mark, still it is useful, for it may prove that our starting point was not sufficiently low. To ascertain this is very important. It tells us to go back to something simpler and easier, till we find what they are capable of comprehending and answering; for we have no power to instruct till we have thus secured firm footing. The question has been a guage of ignorance, if not a measure of knowledge, and has served the purpose of a preliminary. And to this preliminary special attention should be paid. Succeed well with it, and it gives every chance to bring the pupil upon the right tract, on which you and he can travel on together to his profit.

The whole sum of what may be said about questioning is comprised in this: "It ought to set scholars a thinking, to promote activity and energy on their part, and to rouse the whole mental faculty into action, instead of blindly cultivating the memory at the expense of the higher intellectual powers. That is the best questioning which best stimulates the learner to action; which gives him a habit of thinking and inquiring for himself. All our questioning should aim at this; and the success of our teaching must ever be measured, not by the amount of information we have imparted, but by the degree in which we have strengthened the judgment and enlarged the capacity of our pupils, and imparted into them that searching and inquiring spirit which is a far surer basis for all future acquisitions than any amount of information whatever.

JOHN BRUCE,
Inspector of Schools.

ARITHMETIC.

(*Continued.*)

The next series of questions might be on reducing different denominations to some common lower denomination, and lower denominations to one higher denomination. 1st Example. Reduce 49 acres 28 p. 10 yds. 8 ft. and 112 inches to inches, and prove each step of every result.

a. p. y. f. in.
49 28 10 8 112
4
———
1962
40
———
7840 + 28
= 7868 poles.
$30\frac{1}{4}$
———
236040
1967 = $\frac{1}{4}$
———
238007 + 10
= 238017 yards.
9
———
2142153 + 8
= 2142161 feet.
144
———
8568644
8568644
2142161
———
308471184 + 112 = 308471296 inches.

Proof.

144)308471296
9)2142161 re. 112
$30\frac{1}{4}$ 230017 re. 8
4 4
———
121)952068
40)7868 re. 10
4)196 re. 28
49 re. 0 ∴

In. 308471296 = 49 a. 28 p. 10 y. 8 f. 112 in.

Otherwise, by reducing each denomination to inches, and multiplying it by the number of inches to which it is equal, thus—

6272640 = inches in 1 acre.
49 acres.
———
56453760
25090560
———
307359360 = inches in 49 acres.

39204 = inches in 1 pole.
28 poles.
———
313632
78408
———
1097712 = inches in 28 poles.

1296 = inches in 1 yard.
10
———
12960 = inches in 10 yards.

144 = inches in 1 foot.
8
———
1152 = inches in 8 feet.

Totals.

307359360 = inches in 49 acres.
1097712 = inches in 28 poles.
12960 = inches in 10 yards.
1152 = inches in 8 feet.
112 = inches
———
308471296 = inches in 49 acres. 28 pol. 10 yds. 8 ft. 112 in.

2nd. Example. Reduce 13829 yards 5288 poles and 722 roods to successive higher denominations: the highest acres—reducing them first to inches.

		a.	r.	p.	yds.
13829 × 1296 =	17922384 inches =	2	3	17	$4\frac{3}{4}$
5288 × 39204 =	207920752 " =	33	0	8	0
722 × 1568160 =	1132211520 " =	180	2	0	0
	1357444656 inches =	216	1	25	$4\frac{3}{4}$

The illustrations given of the three preceding Tables, with drill-questions, should be quite sufficient to make pupils understand the principles of reduction, and their various applications in processes and calculations. But to make them expert in applying them, they should be subjected to frequent review-drills. In our best schools, some subject, or part of a subject, is *daily under review*. Repetitions and reviews are indispensable in working everything taught into the scholar's mind. Without these, how little of teaching is retained! and of the little retained how lax is its hold on the memory! and how ill-prepared must the scholar be for examinatory drilling! Without these, how greatly is the teacher's labour increased, and small to the pupil must the amount of knowledge of any subject be! I strongly recommend to every teacher systematic reviewing.

Reviewing.

Every lesson has its parts; and these parts have their natural teaching-sequence. The teacher's duty is to consider well which of these should first be taken up—which should be his starting point; and that should be the one with which his pupils are most familiar. On it review till you are satisfied that their ideas on it are clear and correct. Consider, from the nature of the subject, which part should be next presented to them; and for reviewing on which, the *first would best prepare them*. Thus take up each part of the lesson, and each part of a part—passing on from what they *know* to what they know *less* — always taking care that the parts of the lesson have that arrangement which is most suited to the subject.

I have said that every subject has its parts, and sub-parts; and skilfully to teach each the most suitable sequence is supposed, by which the most elementary thing— the easiest for children to comprehend — that which admits of the plainest, the clearest, the most open to the mind, comes first, and first receives attention. And the clearer this elementary part is made to them, and the more it is worked into their understanding, and they, by repetitions and illustrations, master it, the better prepared are they successively to proceed from part to part. And this is much more than passing from the *known* to the *unknown*. It is advancing from the *clearly understood* part of a subject, to the *next well-brought-to-view succeeding part*.

No principle, no part of a subject can be clearly illustrated without bringing to view and partly unfolding the naturally succeeding principle or part. In arithmetic, especially in the fundamental rules, as many principles as possible should, in training, be combined, and in such a way as to make the one throw light on the other. All arithmetical principles have a depending connection which should be preserved in teaching. Adding involves the principle of subtracting, multiplying that of dividing; and the four should, with proper gradation, be taught together.

JOHN BRUCE,
Inspector of Schools.

A Talk with my Boys on Meanness.

Boys, you may lay aside your books. I wish to have a bit of a talk with you. All ready? As I entered the school-house to-day, I heard one of you say, "*That's mean!*" I didn't stop to inquire what it was that was thought to be "mean," but I said to myself "Some boys will do mean things; and some boys are quick to detect meanness." Now I have been thinking that it might be a good thing to talk over with you some of the ways in which meanness may be shown in school. Possibly you and I may not quite agree in our estimate of what is done. And yet I believe that in most cases we shall hold the same opinion. I take it for granted that no one of you would like to have me, or any one else, consider him a mean boy; but as a person is judged by his acts, that epithet justly belongs, of course, to every one whose acts are mean. Do you agree to that? You do? Well, then, I will suppose a few cases.

Suppose that, relying upon your honor, I leave the room, and in my absence you are disorderly, doing things that you would not do in my presence. I call that mean, because it violates the confidence placed in you, and because it shows cowardice. Acts speak as loudly as words. Did you ever stop to think what is said by the boy who takes advantage of my absence to do wrong? *What is it?* I'll tell you. He says just this, "*I'm a mean boy.* I am here on my honor, I know; but I don't care. I'm going to have a good time, though it is mean. School-mates, you are at liberty to set me down as *mean.*" That is what his acts plainly declare. Do you agree with me in this case? Very well. You can't be too careful in making your actions conform to your opinions.

Suppose that a boy pretends to be studying a lesson, when, in fact, he is reading a story-book which he has concealed in his text-book. Shall we call that a mean thing? How many say yes? All. I am glad to see that in this case also we agree. But what makes the meanness here. *Deception?* Agreed . only I should use the stronger word, *lying;* because when a boy has a study-book open before him, and appears to be at work, he says to his teacher as distinctly as words can say, "I am studying my lesson." If, on the contrary, he is wasting his time over a story, he *lies*, and consequently he is guilty of a wickedly mean act. As you value your character, avoid such falsehoods as carefully as you would any other kind.

Suppose a case which is very common in schools: that a boy whose lesson is not perfectly learned stealthily looks into his book during the recitations, in order that he may be able to recite better than he otherwise could, and thus obtain a high mark. I stamp that also with the brand *mean.* Do you ask why? Because it is a species of swindling. It is attempting to gain credit on false pretences. It is pretending to know what he doesn't know. It is doing injustice to honorable classmates, who scorn to rise, or attempt to rise in rank, by dishonest means. Therefore, don't open your book behind your neighbor's back, or under your desk, or anywhere else, for the sake of finding out what you think will come to you. It's *mean.* Don't do it.

Again: suppose that some mischief has been done about the school-house. A desk, or a bench, or a window, for example, has been broken. I inquire for the one who, purposely or accidentally, did the damage. Now that one, if he doesn't acknowledge the deed, suffers suspicion to fall, perhaps, upon an innocent schoolmate, and displays moral cowardice on his own part; and therefore he, too, must be placed among the mean boys. It is the best way, boys, always to do right as nearly as possible; but when you have, from any cause, done wrong, it is wise and manly to confess the wrong, and rectify it so far as you can. Not to do this is to be a coward,—a being that all men despise.

Suppose that your teachers are loboring faithfully in your behalf; that day by day they are patiently endeavoring to interest and instruct you, to explain what is difficult, to cultivate your intellectual and moral faculties, and thus to fit you for living useful, successful, and happy lives; and suppose that some boy, thoughtless of his own good, and destitute of all gratitude to those who are toiling with fidelity for his welfare, is guilty of causing trouble to those teachers by inattention, by playing, by lounging, in short, by doing anything that hinders them in the discharge of their difficult duties. Do you think it severe to call such a boy a mean hoy? Is not ingratitude always mean? And is not that boy ungrateful who, for the labor bestowed upon him by his teachers, gives them in return nothing but trouble and anxiety? Is he not like the dog in the manger, neither willing to accept intellectual food himself, nor to suffer his classmates to receive it, as but for him they might? Yes, boys, we who are teachers will do all we can for your welfare, but I beg of you don't be so mean as to reward us with ingratitude. Help us by your good deportment, and you will thus help yourselves.

I see that the clock says it is time to dismiss. There are other matters that I intended to speak of; but I fear that you may call it mean to be kept after regular hours. You may go, therefore; but first tell me what is the lesson you have learned from this talk. *Don't be mean.* Yes, that's it. Don't forget it.—*R. S. Schoolmaster.*

Never Frighten Children.

A schoolmistress, for some trifling offence, most foolishly put a child into a dark cellar for an hour. The child was greatly frightened and cried bitterly. Upon returning to her parents in the evening, she burst into tears, and begged that she might not be put into a cellar. The parents thought this extremely odd, and assured her that there was no danger of their being guilty of so great an act of cruelty; but it was difficult to pacify her, and when put to bed she passed a restless night. On the following day she had a fever, during which she frequently exclaimed, "Do not put me in the cellar." The fourth day she was taken to Sir A. Cooper, in a high state of fever, with delirium, frequently muttering, "Pray don't put me in the cellar." When Sir Astley enquired the reason, he found the parents had learnt the punishment to which she had been subjected. He ordered what was likely to relieve her; but she died a week after the unfeeling conduct.

Another case from the same authority may here be cited. It is the case of a child ten years of age, who, wanting to write her exercise, and to scrape her slate pencil, went into the school in the dark to fetch her knife, when one of her schoolfellows burst from behind the door to frighten her. She was much terrified, and her head ached. On the following day she became deaf; and on the next, so much so as not to hear the loudest talking. Sir Astley saw her three months after this had happened, and she continued in the same deplorable state of deafness.

A boy, fifteen years of age, was admitted an inmate of the Dundee Lunatic Asylum, having become imbecile from fright. When twelve years of age he was apprenticed to a light business; and some trifling article being one day missing, he was along with others locked up in a dark cellar. The children were much alarmed, and all were let out with the exception of this poor boy, who was detained until past midnight. He became from this time nervous and melancholy, and sunk into a state of insensibility from which he will never recover. The missing article was found on the following morning, exculpating the boy from the guilt with which he had been charged.—*Exchange paper.*

The Culture of the Observing Faculties.

(*From Mr. Warren Burton's work under that title.*)

A child may begin geography long before he goes to school, or, rather, he may lay the sure and proper foundations for this science. When he shall have been taught the points of the compass—east, west, north, and south—then which side of the room the fire is, which the table, and in which direction are the barn and the garden; and when he shall see just how the land lies and looks close around his home, he has had an introduction to geography, or has, in a small degree, been prepared for an introduction. A beginning has been made according to the real nature of things. He understands what he asks about and what he is told. All the words have a meaning to his little mind. Now what you may do, and what he will be glad of, is that you carry him on a little farther, and still farther than he would go, clearly and certainly, without your personal guidance. You must talk him along, and walk him along, until you have together surveyed the neigborhood all around, and he has obtained a positive knowledge of it—a knowledge which he feels to be his own, just as he feels that a knowledge of your door yard or sitting-room is his own. For instance, you can ask him in what direction the street runs; and, if he has not already found out, tell him, and he will soon know beyond forgetting. Have him learn who lives in the next house to his own home on the right hand and on the left; who in the second, third, and fourth, and so on. Of course, this could hardly be done in the brick-blocked, heterogeneously neighbored but unneighborly city. Children at a very early age somehow learn what are a road, a field, a pasture, a wood, a hill, and a brook. Indeed, they quickly become familiar

with most of the prominent features of nature, and the words by which they are designated. They learn much by the incidental conversation of persons around. But you might, by a little pains, make your child a more accurate as well as far-reaching observer than he would otherwise be. Train him to notice every distinct object within the scope of his eye; all the inequalities of the surface, all the varying tints of the vegetation between the first tender green of the spring and the russet of the autumn. Every rock, every little hillock and bush, or whatever else may make a distinctly observable thing, should be a lesson to his eye. Were these diminutive traits in the landscape only magnified, they would be such geographical features as might be noticed in the big school-book; yet the fact that they seem but insignificant lines and dots, as it were, does not make them ungeographical. If geography, according to precise definition, is a description of the earth, then, when these diminutive things are described by your child, he makes real geography out of them, and it will be unspeakably more profitable than the dry, hard description of text-books, as they have generally been forced upon poor little learners, or rather word-getters. If a child be accustomed to such minute observation, he will not, of course, overlook the more prominent marks in a prospect. But, in farther commendation, even some of these minutiæ of the land's surface are important indications to the eye of science; and would you not be glad to have your son look at nature with such an eye? Wherever he shall ramble or travel, would you not have him exercise a keen, detective sight, instead of a vacant gaze?

HOW NOT TO GET LOST.

The exact understanding of the points of the compass is practically of no small importance. Many persons most easily lose the direction when they find themselves in a new place. Indeed, there are those who are absolutely so turned about that sunrise and sunset seem to have exchanged horizons, and it takes some considerable looking round and reflection to get out of the bewildering dilemma. Did all roads run at right angles toward east and west, north and south, and were all houses built square upon them, there would be no difficulty. But, transversed and crooked in all directions as roads and streets have to be, the points of the compass are sometimes hardly found in a whole lifetime. Indeed, there are those who, after a long residence in Boston, scarcely know the direction in which runs that most familiar of all its thoroughfares, Washington street, or which way exactly the grand and far-seen State-house faces. It seems, then, that there might be a real advantage in early and continually training the observation as to the points of the compass. At home, it can be made a matter altogether incidental, and cost no time which may be better employed. Let the cardinal points be well fixed, and it will be easy to fix in the child's mind the direction of prominent objects between, and also the course of the streets, roads, and streams.

In the exercise of individualizing objects before mentioned, as the child's understanding shall advance, it will be well to locate the various objects, in all directions, in respect to the points of the compass. There might be a little emulous pastime about it, as was recommended before in the culture of the perceptions. Why should not the parents be at the pains of purchasing a compass for this very purpose? It would cost no more than many other things usually provided, but which might equally as well be done without. With this instrument, every point of direction might be exactly established. Thus it would be not only easy, but pleasant and profitable, for children to be trained, as they grow up, to know the precise point, from home as a centre, of every farm and house in the town; or, if in the city, of every prominent object there. So accustomed would the young learners become to such definite observations, that, as they should travel out to other towns now and then, they would quite readily fall into these exercises; and the turnings of a road or the windings of a stream, the house on a hill, the village church spire in the distance, might be made an additional trial for this sort of judgment. So eventually, wherever they should travel through the country, their heads would not get confused, as now so often happens. At least sunrise and sunset would keep their places, to their eye, just as Nature really puts them.

JUDGING OF DISTANCES.

In this connection, it may be well to say something more about the measure of spaces and distances. There is a great deficiency in people's minds generally as to accuracy in distance. One has only to travel in the country, and inquire of various people how far it is from one certain place to another certain place, especially if it be as to the way from one town to another, to be convinced how vague are the notions of many persons in respect to space. Why need this be so, if parents, at times, without interfering with any business, should just instruct and amuse themselves and their children in this matter? If a father and son are proceeding to a distant field to work, or to any field, why not for once take a ten-foot pole or a measuring chain, and find out the exact distance? But suppose a boy is going of an errand to a neighbor's, who lives, according to vague supposition, a quarter or half a mile off: let him take his pole or chain, and get the exact measurement, and settle it for good and all. Or, on some leisure time, let the boys, if there are more than one, and the father with them, if he pleases, make a little pastime of the thing. This measuring entertainment may from time to time be extended to any house, or any object, or through any distance whatever, according to convenience. Thus a judgment about distances will be formed, which will come frequently into use in subsequent life.

EDUCATION ON HILL-TOP.

Suppose, now, a pleasant day, and a little leisure at command, to afford your children, and indeed yourselves equally, some little entertainment, perchance instruction. You have already become acquainted, perhaps, with whatever is within view of home. You have observed every house, field, pasture, wood, rock, shrub, gleam of water. However, it is not necessary to wait to get all these nearest things by eye and heart. Take your little company to the highest hill-top you can conveniently reach. From this elevation can be discerned various prominent objects in towns around. Give the young observers the names of these localities, and just the direction in which they lie. There are certain eminences, each perhaps with a name: tell them the name. There, beneath, are the valleys also. Perhaps it may be known that a considerable river has its course through some of them, or at least some brook large enough to turn the useful mill. Describe these streams, well known to your larger experience, which the children cannot discern in their sunken and shaded channels. But they can see with the naked eye, as well as you, the many varied features of the landscape between the centre where they stand and the whole horizon round. Now make a game of it: see who can count the greatest number of distinct fields, or pastures, or separate pieces of woodland, and the greatest number of hills. Indeed, as to this feature, you may let the eye descend to the minutest prominences on the surface, and you will find that the sight will become amazingly sharp, and pick up the least little haycock of a hill at a distance which would not have been thought possible before. Then let the vision hunt after valleys, and any little dips and crinkles in the land's surface, in the same manner. There are cliffs, and rocks, and single trees standing in open land, and houses and out-houses to be playfully sought l kewise. Withal, take note in which direction exactly any road may run, or valley wind, or stream meander; at what point of the compass any house or hill may be situated. If there be a mountain in the distance, there will be something not only to fasten the eye, but to feed it with beauty or lift it to grandeur. Depend upon it, my friends, that you will give your children and yourselves not only a most entertaining, but a very instructive excursion. The visit to the spot may be repeated several times before all the objects of the expanse shall fall beneath inspection, or the lesson or the pleasure be exhausted. By-and-by you will climb, with

your little company of observers, some loftier hill or the mountain-top, and, from such a height, advance your knowledge, possibly, to distant states.

THE USE.

Now let us consider the practical advantage of this actual observation of the earth's surface, and the various objects, natural or artificial, thereon presented. In the first place, it is evident to all that the examination of any material thing by the naked faculties is better, for all possible purposes, than the reading or studying of a description of it. It is safer, certainly, to see a farm with one's own eyes before purchasing it, than to trust to any written description. The general who has actually inspected the ground on which he is to make a campaign, is far better prepared for its emergencies than if he knew the field of operations only as presented by the map. The same may be said of every practical concern. The mind must be prepared to comprehend clearly what is distant, and what cannot be come at through the naked senses, by a thorough inspection of similar things within their reach.

These intellectual facts have scarcely been thought of by the generality of parents and teachers in this time-consuming, and, we may say, heart-burdening matter of education. Now what do children, for the most part, see when they cast their eyes upon a map? Nothing but a plain surface of paper, with black lines crooking here and there, called roads and rivers, and little dots having the names of towns and cities, with blotches standing for mountains; and this is just about all. The brute animals would take into notice almost as much. But with this actual training of the observing powers, as has been recommended, there would appear right on the map, as it were, in definite forms and colors, seen by the vivid imagination, real hills, valleys, streams, roads, every thing just as the map was intented to represent them. That plain paper surface would seem moulded into all the various features and appearances of nature by that mind's eye which had been studying the real earth in these pleasant family excursions. Thus geographical language would be all filled and made rich with real science—the earth's facts. Pray try the experiment, and see.

SCIENCE.

North Polar Exploration.

BY CLEMENTS R. MARKHAM.

Voyages of discovery have been, since the dawn of modern times one of the chief causes of the rise of England's power and greatness. The material wealth which they have been the means of pouring into her lap is incalculable. For this alone they will ever be a leading feature in the history of a mighty commercial nation; for this alone they have been fitted out by many a merchant adventurer; and for this they have been incessantly urged upon the attention of many successive Governments. But it is not on account of the commercial advantages that have been derived from the labours of the explorer that those labours are to be most prized, seeing that it is not to wealth alone that England owes her greatness. Exploring expeditions by sea and land have done as much to increase the store of human knowledge as any other kind of research. They have led the way to the creation of that colonial empire, which had spread the Anglo-Saxon dominion far and wide over the earth. They have fostered the spirit of enterprise, and formed a nursery for the pick of our seamen. They have been a school for our best officers, educating them in that calm self-reliance which the presence of danger alone can give. They have been most important agents of civilization, creating a brotherly feeling of sympathy between the nations in times of peace, and giving one bright side even to the horrors of war, for, by the courtesy of international law, a scientific expedition is respected by all civilized nations.

Seeing, then, that expeditions of discovery have helped so largely to make England what she is, it is no less a matter of surprise than of regret that any proposal to continue them, and to complete work which it is the glory of this country to have commenced, should meet with unreasoning opposition from any influential quarter. Surely it cannot be desirable to close the brightest page of our history for ever, for the purpose of saving a little money, or in order not to risk the lives of men whose value to their country arises from the education they acquire by that very process. The grand saying of good Sir Humphrey Gilbert, when advocating an expedition to the Arctic regions, can never be too often repeated:—"He is not worthy to live at all, who, for fear or danger of death, shunneth his country's service or his own honour, since death is inevitable, and the fame of virtue immortal."

Let it once be shown that an expedition of discovery will add to the sum of human knowledge, that it will lead to valuable scientific results, and that there is no chance of the men who compose it being overtaken by a catastrophe such as that which befel Sir John Franklin's people, and it ought to receive cordial support from public opinion. The collateral advantages that are derived from such expeditions in times of peace are so great that they will be felt by every thinking man. All men may not fully appreciate the value of scientific researches, but no true Englishman can under-estimate the importance of fostering the spirit of enterprise in his countrymen, or fail to desire that the race of men, from Cabot to M'Clintock, which has been formed by expeditions of discovery, should be continued.

What would the glorious reign of Elizabeth be if the stories of Raleigh and Drake, of Frobisher and Fenton, of Richard Hawkins and Grenville, and Gilbert were blotted out? The very name of James I. would fill us with shame, if those of Hudson, Davis, and Baffin were not written in the same page of history. Even the disgrace of having been ruled by his grandsons is slightly mitigated when we find them sending Captain Wood to seek for the North Pole. The readiness with which the statesmen of the last century complied with the suggestions of the Royal Society to send out exploring expeditions wipes away a multitude of sins, and we may condone many acts of misgovernment in consideration of the voyages of Carteret, Byron, Cook, Phipps, and Vancouver. It must never be forgotten that Nelson received no unimportant part of his naval education in the Arctic regions: and that, in the present century, the surveyors and explorers of our navy have been among its brightest ornaments.

The naval enterprise of Great Britain has assuredly been one of the chief sources of her greatness, and it is for the advantage of the country that the spirit which gives rise to it should be fostered and encouraged. Never has this spirit been so systematically ignored, in any period of our history, as at the present moment. Not only is there no exploring expedition engaged in any part of the world, but the most necessary surveys have been starved and neglected. The importrnt proposal to explore the North Polar region, which has recently been made by Captain Sherard Osborn, therefore, comes before us at the very time when its discussion is likely to produce much good, and it certainly deserves most serious and attentive consideration.

I propose, after giving a very brief sketch of the history of the subject, to examine the question whether Captain Osborn's proposal combines those conditions which would justify its favourable consideration by the Government—namely sufficiently important results, and the absence of any chance of such a disaster as overwhelmed the Franklin expedition. The great advantages that are invariably derived from enterprises of this nature, independently of their more obvious result, have already been pointed out.

It has been the ambition of British explorers to reach the North Pole ever since "Master Robert Thorn exhorted King Henry VIII., with very weighty and substantial reasons, to set

forth a discovery" for that purpose; and as knowledge has accumulated, these reasons have become more weighty and more substantial. Bluff King Hal did not haggle at the expense, nor did he discourage the spirit of enterprise among his sailors. He did the right thing, cordially acceded to the proposal, and sent "two faire ships well manned and victualled, having in them divers cunning men to seek strange regions. (1) Subsequent voyages to the northern seas in the Tudor age, opened a profitable trade with the then scarcely known duchy of Moscovy; but the most notable expedition of the sixteenth century was that which was led by gallant William Barenton, and his stout crew of Dutchmen. He discovered Spitzbergen in 1596, rounded the northern extreme of Nova Zembla, and performed one of the most remarkable Arctic voyages on record.

In England the merchants of the Muscovy Company were the great promoters of voyages toward the Pole, and as the introducers of the system of keeping log-books, they ensured the preservation of a record of the results of those voyages. (2) In 1607 they sent bold Henry Hudson, in an eighty-ton vessel, with ten men and a boy, to sail across the North Pole, He discovered the point on the coast of Greenland which still bears his name of "Hold with Hope," traced the ice barrier extending right across from Greenland to Spitzbergen in June; and the name of Hakluyt Head, the extreme N. W. point of Spitzbergen, was also given by Hudson. Having thus satisfied himself of the impossibility of penetrating through the Polar pack to the westward of Spitzbergen, this intrepid explorer next sailed up to its northern end, and examined the condition of the ice in that direction during the month of July. He attained a latitude of 80° 23'; and having ascertained that the pack was as impenetrable in the end of July as it was in June, he returned to England. In 1608 Hudson again sailed with the intention of attempting to effect a passage between Spitzbergen and Nova Zembla, and thus completing the examination of this, the widest opening into the Polar region. He had with him a crew of fourteen men. On the 9th of June he came to the edge of the pack, in latitude 75° 29' N., and gallantly attempted to push through it, "loosing for one piece, and bearing roome for another." But he soon discovered that this sailing ice, only existed at the outer edge, and in four hours he found the pack to be so thick and firm ahead, as to present an impenetrable barrier. He therefore began to coast along the pack edge, with the ice always "trending on his larboard" from the 9th until the 26th, when he sighted the coast of Nova Zembla. (3) During this voyage Hudson discovered the Gulf-stream flowing northwards, with divers pieces of drift wood floating on it. This intrepid seaman had now completed the examination of the space between Greenland and Nova Zembla, in two very small yachts; and he had ascertained beyond a doubt, by careful inspection, that an impenetrable barrier of ice stretched along the whole distance, barring the passage to the Pole. He found that on the Greenland coast this barrier came down as low as 75°, that it thence trended to the N. E,, until in the meridian of Spitzbergen its outer edge was north of 80°; and that further east it extended south again to about 75°, and stretched away to the coast of Nova Zembla. Thus, "by the means of the great plenty of ice, the hope of passage between Newland (Spitzbergen) and Nova Zembla was taken away."

(1) *Hakluyt*, iii, p. 129.

(2) Sebastian Cabot, in his instructions to Willoughbby and Chancellor, was the real originator of the log-book.

(3) On the 15th of June two of his company, named Thomas Hiles and Robert Rayner, saw a mermaid close to the ship's side, and looking earnestly upon them; but a little after, a sea came and overturned her. From the navel upwards her back and breasts were like a woman's, her body as big as one of us, her skin very white, and long hair hanging down behind, of colour black. In her going down they saw her tail, which was like the tail of a porpoise, and speckled like a mackerel. Hudson's editor suggests that this was a seal, and adds the testimony of Dr. Kane, that there is something in the appearance and movements of this animal strongly akin to those of human beings.

In 1611, Jonas Poole, and in 1614-15, Baffin and Fotherby, made similar unsuccessful attempts in the direction of Spitzbergen, and in 1676, the Admiralty of Charles II. sent Captain Wood to attempt a passage to the North Pole, but he lost his ship on the Nova Zembla coast. This important and interesting subject was then lost sight of in England for nearly a century, from the time of Wood (1676) to that of Phipps (1774). It was quite clear that for Hudson's cock-boat, and such like craft, the portals of the unknown region were firmly closed. It remains to be seen whether a sharp-bowed screw-steamer will be able to force them open.

The Spitzbergen Seas, however, were a favourite Dutch and English whaling station during the whole of that time, and vessels frequently reached a latitude of 80°, and sometimes of 81°, or 82°, or even 83°, (1) as the position of the Polar pack varied in the different seasons. When the idea of an expedition to the North Pole was again mooted in the last century, Mr. Daines Barrington, a Fellow of the Royal Society, with great industry and perseverance, collected a number of stories of whalers having frequently attained incredibly high latitudes, and as these fables have since been brought forward as arguments in favour of a Spitzbergen route to the Pole, it will be as well to examine what they are really worth.

The most marvellous of all is that told by Master Joseph Moxon, hydrographer to the King's most excellent Majesty in 1697. He got most outrageously chaffed by some merry Dutch sailors in a beer-shop at Amsterdam, and gravely published what he had been told, (2) expecting every "sober, ingenious man" to believe it. Scoresby has pointed out that the instances of voyages having been performed beyond 84°, are in no case given from the direct communications of the voyagers themselves, and he therefore infers that no reliance whatever is to be placed upon these extraordinary instances. (3) Moreover, he finds that nearly all the cases of ships having sailed as far as 82° and 83°, were either given from memory, at a distance of eighteen to thirty years from the time when the alleged voyages were made, or at second-hand. But the strongest proof of the small reliance to be placed on the observations of these whaling captains is to be found in the statements of Captains Robinson, Clarke, and Bateson, who declared they reached 81° 16', 81° 30', and 82° 15', with open water before them, in the very year, and in the same longitude that Captain Phipps was stopped in 80° 48' N., by a continued smooth, unbroken plain of ice extending to the horizon.

When Mr. Barrington asked the Dutch skippers themselves, he got the simple truth from them; they said, "We can seldom proceed much higher than 80½°, but almost always to that latitude." (4) Captain Jansen, of the Dutch Navy, also says, "I do not think our Polar navigators have been further north than

(1) Parry thought that a vessel might have reached to 83° N. in 1827.

(2) *A Brief Discourse of a passage by the North Pole to Japan and China.* By Joseph Moxon, F.R.S., Hydrographer to the King's most excellent Majesty (2nd edition). London, printed by J. Moxon, and sold at his shop at the Atlas in Warwick Lane, 1697.

He says, "About 22 years ago, being in Amsterdam, I went into a drinking house to drink a cup of beer for my thrist, and sitting by the public fire among several people, there happened a seaman to come in, who, seeing a friend of his there who he knew went in the Greenland voyage, wondered to see him, because it was not yet time for the Greenland fleet to come home. His friend, who was a steersman, said that his ship sailed into the North Pole and came back again. I entered into discourse with him, and he did assure me it was true; and told me, moreover, that they sailed two degrees beyond the Pole. I asked him if he found no no islands or lands about the Pole, and he told me no, there was a free and open sea. I asked him if they did not meet with a great deal of ice. He told me no, they saw no ice. I asked him what weather they had there. He told me fine warm weather, such as was at Amsterdam in the summer time, and as hot. I should have asked him more questions, but he was engaged in discourse with his friend, and I could not in modesty interrupt them further. I believe he spoke truth, for he seemed a plain, honest and unaffectatious person."

(3) Scoresby's *Arctic Regions*, i. p. 42.

(4) The Commissioners of Longitude, in 1821, reported that there was no well-authenticated account of any vessel having gone so far as 81° N.

82.0" (1) There is not, in reality, a shadow of evidence that any vessel has ever passed through the Polar pack, and the latitudes attained by whalers have depended on the position of this pack in the different seasons. If it has drifted south late in the year, they have been able to go further north, and Captain Scoresby certainly, in 1806, reached 81° 30′, and found the navigation quite open for many leagues to the E.N.E. If, on the contrary, it has come down early, then they have been stopped in lower latitudes. So much for the whaling fables.

Attempts to reach the Pole were first renewed by the Russian Government, and Vassili Tschitschagoff, in two successive expeditions (1765 and 1766), perseveringly, but vainly attempted to find a way through the ice between Spitzbergen and Greenland. He only reached 80° 30′ N. At that period the president and Council of the Royal Sooicty of England were ever foremost in urging the Government to undertake scientific expeditions. Would that their successors of the present day more closely followed their noble example. In 1773, a memorial was addressed by the Royal Society to the King, to obtain his sanction for an expedition to see how far navigation was practicable towards the North Pole. (2) Two vessels were forthwith fitted out and despatched, under the command of Captain Phipps, who had orders to proceed as near the North Pole as the ice would permit, but to return before the winter should set in. He made the attempt between Spitzbergen and Greenland, but was stopped, like Hudson, and so many others before him, by the Polar pack. He examined the pack edge very carefully, from longitude 2° to 20° E., but never got beyond 80° 48′ N. The expedition of Captain Buchan, in 1818, made the attempt in the same direction, but never got farther north than 80° 34′ N. This expedition, however, made a more extensive examination of the pack edge than the preceding one, having traced it from longitude 10° to 40°, both in the months of June and September, without finding a single lane on opening by which to enter it. Then followed a Russian expedition in 1824, when Admiral Luthe traced the edge of the ice, between Spitzbergen and Nova Zembla, from longitude 62° to 44° E., but he never got further north than 77° (3)

These unsuccessful endeavours to find a passage for vessels through the Polar pack between Greenland and Nova Zembla, led Sir Edward Parry to conceive the bold idea of travelling over the ice in sledges and boats during the summer, and thus reaching the Pole. (4) His scheme was approved by the Admiralty of that day. He sailed in April, 1827, and leaving his vessel in Hecla Cove (lat. 79° 57′ N.), in Spitzbergen, he set off in two boats, with four sledges, and seventy-one days' provisions, on June 21st, going due north. He was stopped by the ice in latitude 81° 12′ 51″ N., and commenced the laborious work of dragging the boats over it on the 23rd. (1) But he had started too late in the season, the pack was much broken up and intersected with lanes of water, and it was drifting rapidly to the southward. After travelling over 192 miles of ice, Parry had only reached a latitude of 82° 45′ N. on July 27th, when he determined to cease his fruitless labours and return. From his extreme northern point a strong ice blink always overspread the northern horizon. Parry certainly met with an unusually open season, and the quantity of rain which fell and rapidly rotted the ice, is proved by the observations of Scoresby, during several years in the same region, to be quite exceptional. He returned to the ship after an absence of forty-eight days, having travelled over 569 miles. The failure of Parry was due to his having started too late in the season. There can be no doubt that had he set out in February, when the ice is fixed, instead of the middle of summer, he would have been far more successful. As it is, no European has ever yet reached so high a northern latitude as Sir Edward Parry.

One more expedition requires notice, although it was in a totally different direction. After Hudson had ascertained the ice barrier between Greenland and Nova Zembla to be impenetrable, that worthy old pilot Baffin, in his little vessel, the "Discovery," of fifty-five tons, made an attempt further to the west, entered the bay which bears his name, pushed through the middle pack in twenty-two days, and discovered the entrance of Smith Sound in 1616. This, and not the Polar pack, is the true portal for future North Polar Exploration; but hitherto, only one expedition has attempted to explore it. Dr. Kane, in the little schooner "Advance," wintered there, from 1853 to 1855, and one of his travelling parties, pushing north along the Greenland coast, reached the latitude of 80° 40′ N., came to an open iceless sea, and saw land trending away to the northward, as far as the eye could reach. These Americans were undoubtedly the discoverers of the most northerly known land in the world. Dr. Hayes, a companion of Dr. Kane, has since wintered in Smith Sound, but no account of his proceedings has yet been published.

This completes the enumeration of expeditions which have attempted to penetrate into the North Polar region. The English Government has sent three expeditions to the edge of the ice between Greenland and Nova Zembla, those of Wood, Phipps, and Buchan, during as many centuries, and Parry's boat journey took place in 1827. No attempt has been made since the latter date.

Let us now consider what this vast unknown region is, and what results may be derived from its exploration. If we look at a North Polar chart, we shall see a blank space from 80° to the Pole, only very slightly nibbled at its circumference by Dr. Kane's party, who got forty miles beyond the 80th parallel in Smith Sound, and by Parry, who travelled over the ice into this unknown region for a distance of 165 miles. Here, then, is a vast circular tract of land, and sea, and ice, which is absolutely unknown, with a diameter of 1200 miles, and an area of 1,131,000 square miles.

Our complete ignorance of this large portion of our planet is in itself a strong reason for exploring it. Even if men of science were unable to specify any positive result beforehand, it might fairly be urged that the examination of this vast region must inevitably increase the store of human knowledge, and thus bear rich fruit. But, in truth, we have the highest scientific authority for asserting that there are many questions of the greatest importance which call for investigation in the North Polar region.

(1) Captain Jansen (the learned author of that charming chapter on land and sea breezes in Maury's *Physical Geography of the Sea*) has undertaken to investigate this subject, and to examine such ancient journals of Dutch explorers as are still extant in Holland. He tells me that the learned Pontanus, in 1646, said in a speech :—"There are some persons who think the best route to the East is to go to 82° N. of Nova Zembla, or thereabout, because there the days and summers are longer, there is not so much ice, and it does not drift from the shore. Also because the climate is more mild than in 76° and lower down. Although I am convinced that this opinion is true, and that there will be no difficulty in navigating the sea when once in 82°, yet the difficulty is to come there and return." With this learned conviction for his starting-point, Captain Jansen will search for the date whence Pontanus derived his knowledge.

(2) By the Act 16 Geo. III, cap. 6, Parliament offered a reward of £5000 to the person who should first sail beyond 89° N. A new Act on the same subject was passed in 1814 (58 Geo. III, cap. 20). To the first ship that should sail to 83° N., £1000 was granted; to 85°, £2000; to 87°, £3000; to 88°, £4000; and to 89°, £5000. I am glad to see that, in the recents Acts of Parliament sweeping away a great number of Statutes (24 and 25 Victoria, cap. 101, and 25 and 26 Victoria, cap. 125), these rewards for Polar discovery have not been repealed.

(3) To complete the story of these vain attempts to penetrate through the Polar pack between Spitzbergen and Nova Zembla, it must be mentioned that a Russian expedition, commanded by Lieutenant Wrangel, started in 1863. That officer lost both his vessels in the ice off Nova Zembla, and escape in his boats.

(4) Sir John Franklin had previously drawn up a plan for making this attempt, and volunteered to conduct it.

(1) Parry's weight per man was 260 lbs., a weight which subsequent experience has proved to be too great. 220 lbs. per man is the greatest weight that a party should start with in Arctic travelling. His allowance of food per man was not sufficiently liberal (biscuit 10 oz., pemmican 9 oz., cocoa powder 1 oz., rum 1 gill, tobacco 3 oz. per week).

Foremost among them is the subject of geographical discovery —the exploration of the northern side of that wonderful glacier-bearing continent of Greenland, and the completion of our knowledge of any other land that may exist within the unknown area. A very noble and unmistakeably English work is this. To use the words of one who has himself taken no small share in such work in former days, and who is now President of the Royal Society, " It is the greatest geographical achievement which can be attempted, and will be the crowning enterprise of those Arctic researches in which our country has hitherto had the pre-eminence." Phenomena never yet seen by mortal eye will be observed by the bold explorer who reaches the Pole. He will see the sun revolving with a uniform altitude from the day it comes north of the equator in March until it returns in September, its altitude being equal to its declination. He will ascertain new facts connected with terrestrial magnetism, and series of valuable observations on variation and dip over this unknown area, will be of real practical utility.—*Intellectual Observer.*

(*To be continued.*)

Leaves from Gosse's Romance of Natural History.

(*Continued.*)

THE VAST.

Highly attractive to a young observer is the variety of life which meets his eye, as he examines, with a good microscope, a drop of water from some pool rich in organisms. Suppose he has nipped off the growing terminal bud of some *Myriophyllum* or *Nitella*, and, having a little broken it down with the point of a needle, has placed it in the animalcule-box of the instrument, with a small quantity of the water in which it grew, selected from the sediment of the pool-bottom. The amount of life at first is bewildering; motion is in every part of the field; hundreds and thousands of pellucid bodies are darting across, making a mazy confusion of lines. Some are mere immensurable points without apparent form or diameter; others are definable and of exceedingly various shapes. Aggregations of little transparent pears, clinging together by their stalks so as to form balls, go revolving merrily through their waste of waters. Presently one of the pears severs its connexion with the family, and sets out on a voyage on its own individual responsibility; then another parts company; and you see that there are plenty more of the same sort, roving singly as well as in clusters; little tops of clear jelly with a few specks in the interior. Here comes rolling by, with majestic slowness, a globe of glass, with sixteen emeralds imbedded in its substance, symmetrically arranged, each emerald carrying a tiny ruby at one end—a most charming group. Elegant forms, resembling fishes, or battledores, or poplar-leaves, for they are of many kinds, all of a rich opaque green hue, with a large transparent orange-coloured spot, wriggle sluggishly by, the leaves now and then rolling themselves up spirally, and progressing in a cork-screw fashion. Disks of clear jelly are seen, which are continually altering their outline, so that you soon come to the conclusion that they have no particular form, but every imaginable one in turn. The mass, which seems a mere drop of thin glaire, almost or quite homogeneous, with only one or two bubbles in it, pushes out points and projections from its outline, excavates other parts, lengthens here, rounds off a point there, and this as long as we look at it, so that it never appears twice in the same shape. Here a tiny atom arrests the eye by its singular movements. Its appearance is that of an irregular ball, with a bright spot near the circumference; the whole surface set with bristles projecting obliquely from the periphery, not perpendicularly, much thicker and stronger in the vicinity of the bright spot. It remains in one place spinning round and round upon its centre, sometimes so rapidly as to preclude any sight of its distinctive characters, at others more deliberately, displaying its bristles and surface. Sometimes it rolls over in all directions, as if to let us see that it is subspherical, not discoid. And now and then it takes a sudden spring sideways, to a distance perhaps twenty times its diameter, when it spins as before, or else skips about several times in succession. Altogether this is a very active little merry-andrew.

A great oblong purplish mass comes rolling along, a very Triton among the minnows. He suddenly arrests his headlong course, makes his hinder-end take hold of a fragment of leaf, and unfolds his other end into an elegant trumpet, with one portion of the lip rolled in with a sort of volute, something like the beautiful African Arum or *Calla*. The body now lengthens, and goes on lengthening, until the lower part, which is adherent, is drawn out to a very slender foot. The open mouth, studded round with a wreath of vigorous cilia in rapid rotatory motion, strikes us with a pleasing surprise. The cilia are seen, like hooks, at those parts of the circle, which in perspective are brought in or near the line of vision, either turned outward or inward according as their motion is more or less rapid; the other parts of the wreath being visible only as a thin film along the line of their points, and like little teeth at their bases. The obscure semi-transparency of the texture of the animal renders it very difficult to discern the form of the trumpet-outline satisfactorily; at one time it appears as if circular, but with a large round piece cut out of one side, which yet has a thin filmy edge, as if the hiatus were covered by a transparent membrane. Then perhaps the mouth is turned slightly towards the eye, and this hiatus is no longer discernible anywhere, but one part of the margin is rolled inwards spirally, but how the other part joins this it is difficult to see. Then suddenly the orifice appears again, but as a large round hole cut out of the side, with the margin quite entire above it; then in a moment this aperture is seen rapidly to contract, and close up to a point. But all these appearances—the mystery of which so greatly heightens the interest of these creatures to a young observer—seem to depend on the presence of a contractile bladder which alternately fills and empties itself, and, when distended, frequently displaces the coloured parenchyma or flesh, to such a degree that only the thinnest film of transparent skin bounds it externally.

The tuft of needle-like leaves, too, is full of life. To the outer ones are clinging multitudes of Diatoms in fans and fantastic chains; and multitudes more of single ones are sprawling about the field, contrasting, by their slow, jerking progress, with the rapid, headlong dash of the animalcules. On the plant-stem, as if on solid ground, is fixed a beautiful tree (*Carchesium*), with many slender, divergent branches, springing from a straight trunk. The branches bear, instead of leaves, elegant transparent bells or wine-glass-like vases, which are scattered thickly over them; and each vase is furnished with a ring of cilia round the mouth, which rotates while it is open, but which at will can be withdrawn and quite concealed by the closing up of the mouth. Every moment one or other of the numerous branches contracts spirally, with force, like a wire-spring when weighted, and then deliberately straightens itself again. And, now and then, the main trunk itself contracts in the same manner, but less perfectly; and when it extends we may see a band running down through the middle of its pellucid substance, in which the contractile power manifestly resides, and which is probably of the nature of muscle. The elegant vases have several globules of yellowish matter in their clear substance, which seem to be stomachs, or more correctly temporary cavities for the reception of food; for if a little indigo or carmine be mingled with the drop of water, the ciliary rotation brings it to the mouth, and presently we see globules of a faint blue or pink hue appear in the colourless flesh, and these speedily augment the depth of their tint, as more and more of the pigment is imbibed, until they at length attain the richest deep blue, or full crimson.

The observer may, perhaps, see also that most elegant of animalcules, the *Floscularia*. A tube of jelly stands up from one of the leaves, so filmy and transparent, that one perceives it only by the sedimentary matters that have become entangled in its outer surface. It seems to be deposited progressively—a mucus excreted and thrown off by the skin of the tenant; and hence the upper portion, being the most recently formed, is destitute of such extraneous substances, and can with the greatest difficulty be traced to its termination. Within this tube resides the beautiful constructor; a very slender foot or pedicle, capable of being drawn out to such a length as to equal that of the tube, and of being suddenly contracted at the pleasure of the animal, merges into an ovate body of translucent flesh, in which all the organs are clearly visible. The upper portion expands into a most exquisite disk or shallow cup of clear gelatinous membrane, having five angles, each angle being terminated by a rounded knob. Each of these five knobs is the seat of a pencil of long straight bristles, of the most subtle tenuity, which look as if they had been drawn out of the finest spun-glass. There may be perhaps fifty hairs in each pencil, which radiate from their common base in all directions, and, as they are graduated in length, the effect of these hairs is most charming. Any little shock, such as a jar to the table, or the shutting of a door, alarms the beautiful creature, and it suddenly closes up its elegant flower, and retreats into its tube, the hairs forming a cylindrical bundle as it goes down. It presently emerges again, however, and unfolds its array as before. The pencils of hairs are carried quite motionless when expanded, but when the united bundle is in the act of protrusion, a kind of thrill, a quivering wave, is frequently seen to run through it from end to end. There is a wreath of rotating cilia on the face of the disk, the effect of which is to draw floating bodies

around into its vortex; and the little giddy monads that are whirling heedlessly along, may be seen to be thus entrapped by the living whirlpool, one after another, and engulphed in the transparent prison. And there we may follow them with our eye, and watch their fate. Hurled round and round in the capacious crop, a pair of nipper-like jaws at length catches hold of them, gives them a squeeze, lets them go round again, presently seizes and nips them again, until, after a few preliminary bruising of this sort, the ill-fated atom suddenly goes with a gulp down a kind of trap-door into the true digestive stomach, and is presently dimmed and lost in the mass.

Several tiny creatures are labouring with the most praiseworthy industry among the close leaves of the plant. Here is one which may remind us of a guinea-pig in its general outline, but you must suppose the two hind-feet to be changed into a divergent fork, and the fore-feet to be obliterated. It is a most restless little rogue; ranging among the filamentous leaves of the *Myriophyllum* with incessant activity, he now pokes his way through some narrow aperture, using his curious forked foot as a point of resistance, now pauses to nibble among the decaying rind, and now scuttles off through the open water to some other part. We see his large eye, shining with the colour of a ruby, and set, like that of Polyphemus, right in the middle of his forehead, and his curious apparatus of jaws, the points of which are protruded from the front of his head, and vigorously worked, when he is grubbing among the decaying vegetable matter, adding continually morsel after morsel to the great mass of yellow-green food which is already swelling out his abdomen to a pig-like plumpness. And when he swims away and gives a fair view of his back to us, we notice the evolution of a pair of hemispherical swellings, one on each side of the broad head, and which are evidently connected with his locomotion. The whole front is clothed with vibrating cilia, but they are more developed on these organs, which are only pushed out at the will of the little animal, when they form strong vortical currents.

In another part of the bunch of leaves possibly a group of *Salpinæ* may be feeding equally busily. These are something like the former, but their bodies are inclosed in a sort of shell or transparent case, much arched along the back, nearly straight along the belly, and hollowed out at each extremity. This shell is a very beautiful object, when we meet with it, as we often do, completely cleaned of the softer parts, the animal having died. It is hard, perfectly transparent, but marked all over with minute pits. It is closed on all sides, except before and behind, where, as I have said, it is cut away, as it were, for the egress of the head, and the forked foot: along the back it rises into two tall, longitudinal, sharp ridges with a deep furrow between them, and the appearance of this double ridge, from the perfect transparency of the material, has a curious effect as the animal moves about. Both before and behind, the ridges run out into projecting points, those of the front arching over the head like curving horns. These little animals derive their nourishment likewise from the soft vegetable tissues, or the half-dissolved matter that accumulates on the stems and leaves of the aquatic plants. On this they feed greedily, and nearly the whole of their time is spent in munching away this with the mouth. To do this the foot, which consists of two stiff unjointed styles, is brought into requisition. These are capable of being opened or closed like the feet of a pair of compasses, and of being brought round into any position through the flexibility of the base, which forms false or telescopic joints. The tips of these foot-styles are used as a pivot on which the animal moves; they are placed perpendicularly to the stem, or other substance, on which it means to crawl or feed, and the body is brought down horizontally, so that the head can touch the same plane. Thus, without moving its points of support, the animal can reach a considerable extent of surface with its mouth, either stretching forward until the feet are nearly horizontal, or drawing backward until the points are under the belly.

When I used the term "greedily" in describing its eating, it was rather with reference to the activity and apparent eagerness with which the little creature labours, than to the quantity actually devoured. This indeed is not very perceptible, though the jaws are continually thrust forward, and are opened and closed with untiring perseverance and energy. Probably they are not capable of detaching more than the minutest particles, for the effect produced is not the visible admission of atoms into the stomach, as in the former example, but the gradual discoloration of the viscera, which become stained with a yellowish olive hue, that grows more and more intense.

The large oval eggs of this animalcule may also be seen adhering to the leaves here and there, so large as to be nearly half as long as the whole animal; they are beautifully symmetrical, are inclosed in a brittle transparent shell, and look like birds' eggs. If we watch an individual, we may easily see an egg laid; taking care to select one that is in the egg-producing condition; a selection which the perfect transparency of the tissues enables us to make readily. The ovary occupies the ventral region, and when an egg is in process of development, its mass gradually becomes more and more opaque, and larger, until nearly half of the bulk of the body is filled up with it. Then suddenly it is discharged, a soft and shell-less mass, but immediately on exclusion it takes its regular oval figure, and the integument presently hardens into a shell.

Patience, moreover, for a few hours will be rewarded by a sight of a living well-formed animal hatched from this new-laid egg. At first it remains so turbid as to be almost opaque; but in the course of a couple of hours or so, it is perceptible that the contents are becoming pellucid flesh, and developing into organs and viscera, the integuments and membranes becoming more and more manifest in their overlying infoldings. Another hour passes; and now the action of the frontal cilia is discernible; at first as faint fitful waves, which, however, become momentarily more vigorous, until at length their lashings are distinct and incessant. Meanwhile the eye has been coming into view, visible first as a pale red tinge in a particular spot near the middle of the egg, and gradually acquiring a definite outline, and a ruby-like translucent brilliancy. After this a little working action is perceived behind the eye, which shews that there the jaws are already developed, and that their proper muscles are assuming form and contractile power. About four hours have now elapsed since the egg was laid; the movements of the embryo are now vigourous, sudden, and spasmodic, the folds of the body-integument change their places, and the cilia work more rapidly. Presently, the oval form of the egg undergoes a slight alteration; it becomes more elliptical, and then slightly constricted in the middle, apparently by the pushing outwards and inflating of the two extremities of the body. At this moment a white line flies round the anterior end of the egg: it is a crack, and the next instant the separated portion of the egg-shell is pushed off, and the head protrudes, the cilia waving nimbly in the water. A moment the new-born young sits in the shell as in a nest; but now it glides forth, and we see that in every point of form and structure it is the very counterpart of its parent, the shell, the foot, all the internal viscera, being perfect and *comme il faut*.

The shells in which these little creatures are enveloped are models of symmetry and elegance, and display great variety of form. Some of them are sculptured in curious and beautiful patterns, an elaboration which is truly surprising when we think of the invisible minuteness of the entire creature. One is clothed with a shell of the usual glassy mail, nearly circular in outline, very flat, but a little arched on the back aspect, the chin hollowed out in a semicircle, and the brow armed with two horns curving downward: the posterior extremity square, with two lateral spines. The entire surface of this shell is covered with minute elevated points, which extend even to the horns and spines; and besides these, the dorsal surface is marked with elevated ridges, which form a regular raised pattern, impossible to describe by words, but of curious symmetry, forming three perfect pentagonal areas, and parts of eight others surrounding them.

This kind of sculpturing is most remarkable in a little active genus, which, being wholly without the foot common to this class of animals, is always found swimming, being apparenty incapable of resting, or, at least, of crawling. The group contains many species, and most of them have their shells ornamented with some symmetrical variation of the surface. In one, a ridge runs down the middle of the back, dividing the shell into two equal lateral portions, each of which is subdivided into about ten polyhedral areas by intervening ridges, of which no two are alike in form, though each corresponds accurately with its fellow on the opposite side. The form of each area is constant in every individual. In another, the medial line is occupied by five areas, of which the first is an imperfect hexagon, the second is square, and the posterior three are hexagons; from the salient angles, other ridges run off sidewise, and form other imperfect polygons. In another the division is into many hexagonal tesselations, varied with other forms in the outer or hinder areas according to the species, and having the peculiarity that the dividing ridges are well-defined narrow elevations armed throughout with conical points in single row.

I may be accused of exaggeration in presuming all these creatures to be seen in one drop of water. I do not pretend to be depicting them from one single actual observation; at the same time I may say that I have described nothing but what I have personally observed; and I have known many small pools and other collections of water, sufficiently rich in organic life to afford examples of quite as many species as I have enumerated, aye, and many more, *in a single dip taken at random*, though all might not appear in the live-box at one time. However, the point is, these and hundreds of others are easily obtainable, and cannot fail to delight the observer. The variety is almost endless.

Scarcely anything more strikes the mind with wonder than, after having been occupied for hours, perhaps, in watching the movements and marking the forms of these and similar creatures, till one has become quite familiar with them, suddenly to remove the eye from the

instrument, and taking the cell from the stage, look at it with the naked eye. Is this what we have been looking at? This quarter-inch of specks, is this the field full of busy life? are here the scores of active creatures feeding, watching, preying, escaping, swimming, creeping, dancing, revolving, breeding? Are they here? Here? Here is nothing, absolutely nothing, but two or three minutest dots which the straining sight but just catches now and then in one particular light.

Truly, the world which we are holding between our finger and thumb —this world in a globule of water—this world of rollicking, joyous, boisterous fellows, that a pin's point would take up, is even more wonderful than the shoals of whales that wallow in Baffin's Bay, or the herds of elephants that shake the earth in the forests of Ceylon. Truly, the great God who made them is *maximus in minimis!*

OFFICIAL NOTICES.



NOTICE TO SCHOOL COMMISSIONERS AND TRUSTEES

School Commissioners and Trustees are requested to transmit to this Department, as in duty bound, the names of all persons elected by the Ratepayers for School purposes, whether they be elected during the month of July or at any other time. The information thus to be furnished being indispensable, the grant will be withheld from Municipalities which shall not have complied with this notice.

All names should be written in a legible hand and in full.

APPOINTMENTS.

SCHOOL COMMISSIONERS.

His Excellency the Governor General in Council was pleased, on the 7th May last, to approve of the following appointments:

County of Ottawa.—St. Elizabeth of Franktown: Messrs. Michael John McLane and Thomas Murtagh.

County of Beauharnois.—St. Louis de Gonzague: Mr. Louis Pierre Coutlée.

County of Chicoutimi.—Ouiatchouan: Messrs. Jean Baptiste Podvin, Hubert Villeneuve, Sabin Gagnon, Chrysostôme Boivin and Ephrem Brassard.

(*And on the 3rd instant*).

County of Stanstead.—Hatley: Mr. Robert Spendlove.

(*27th June* 1865).

County of Wolfe.—Wolfestown; Mr. Joseph Narcisse Papillon.

County of Gaspé.—Cap-des-Rosiers: Messrs. Henry Packwood and Antoine Cassivi.

County of Arthabaska.—West Chester: Mr. Jean Baptiste Leblanc.

(*And on the 30th June* 1865).

County of Temiscouata.—St. Modeste: Mr. Thomas Roy.

TRUSTEES OF DISSENTIENT SCHOOLS.

His Excellency the Governor General in Council was pleased, on the 17th May last, to approve of the following appointment:

County of Shefford.—Granby: Rev. Michael McAuley.

ERECTIONS, &c., OF SCHOOL MUNICIPALITIES.

His Excellency the Governor General in Council was pleased, on the 16th instant, to erect the following portions of territory into a separate municipality for school purposes, under the name of the *School Municipality of Howick*, in the county of Chateauguay, to wit:

1st. The first double range in Williamstown, Lots 74, 75, and 76, Williamstown, and Lots 14 to 23, both inclusive, in North Georgetown, the whole lying within the municipality of Ste. Martine; 2nd, Lots 77 to 97, both inclusive, in Williamstown; Lots number 2 to 24, both inclusive, in South Georgetown, the 4th, 5th, 6th and 7th ranges of South Georgetown, the whole lying within the municipality of St. Jean Chrysostôme; and 3rd, Lots number one to 27, both inclusive, in the first range of South Georgetown, Lot number one formerly including the village of Howick and mill properties; Lots 16 to 27, both inclusive, in the second range of South Georgetown, and Lots 20 to 17, both inclusive, in the third range of South Georgetown, the whole lying within the municipality of St. Malachie d'Ormstown.

His Excellency the Governor General in Council was also pleased, on the 16th June,

1. To erect the Townships of Linière and Jersey, in the county of Beauce, into a municipality for school purposes, by the name of the *School Municipality of St. Côme*, including the said townships of Linière and Jersey from the River Metgermette to the line dividing St. George from Kennebec.

2. To divide the municipality of Lochaber, in the county of Ottawa, into two distinct municipalities for school purposes, one of which to retain the name of *Lochaber* and the other to be called the *School Municipality of St. Malachy*, and each to have the same limits as are assigned to them for other civil purposes, respectively, by the 27th & 28th Vic., Cap. 67.

3. To detach that portion of the School Municipality of Ste. Monique No. Two, in the county of Nicolet, lying south of the south-western branch of the River Nicolet, and to annex it to the school municipality of St. Zéphirin, in the county of Yamaska: also, to detach the remainder of the said school municipality of Ste. Monique No. Two, except that portion now belonging to Ste. Brigitte, and to annex it to the school municipality of Ste. Monique No. One, in the said county of Nicolet.

4. To erect the new parish of St. Luc, in the county of Champlain, into a school municipality distinct from that of Champlain, with the boundaries assigned to it in His Excellency the Governor General's Proclamation of the 19th January, 1865.

5. To erect the new parish of Ste. Angèle, in the county of Rouville, into a school municipality distinct from that of Ste. Marie de Monnoir, with the limits assigned by the Proclamation of His Excellency the Governor General, dated 25th March, 1865.

6. To detach from the school municipality of Chertsey, in the county of Montcalm, Lots 41 to 55, both inclusive, in the 1st, 2nd, 3rd, 4th, 5th, 6th, 7th and 8th ranges, and to annex them to the school municipality of St. Alphonse Rodriguez, in the county of Joliette.

7. To detach the following portions of territory from the school municipality of Mansfield, in the county of Pontiac, and to annex them to the school municipality of St. Elizabeth of Franktown, in the same county, to wit: Lots 1, 2, 3 and 4 in the first range Lots, 1, 2, 3, 4 and 5 in the second range, Lots 1, 2, 3 and 4, in the third range, and Lots 1, 2, 3 and 4, in the fourth range.

N. B. The erections of school municipalities and changes above mentioned to take effect from the 1st July 1865, inclusive.

His Excellency the Governor General in Council was pleased, on the 24th June last, to detach from the School Municipality of St. Augustin, in the county of Two Mountains, that portion of territory or Concession called "Grand St. Charles," and to annex it to the school municipality of St. Eustache, in the said county.

DIPLOMAS GRANTED BY McGILL NORMAL SCHOOL.

Elementary School Class.—Elizabeth Martha McMurtry, Lucy Maria Gillies, Sarah Ann McBain, Mary Emily Lynch, Matilda McCrae, Mary Ann Ada Munroe, Maria Jane Cameron, Elizabeth Henry, Jemima Thompson, Eliza Higgins, Elizabeth Boa, Jane Baillie, Louisa Theresa Coates, Elizabeth Jane Kissock, Melissa Urquhart, Sarah Alfreda Whittle, Selina Frances Sloan, Marion Lucy Warren, Mary Saunders, Fanny Noble, Ann Scott, Mary Ann Bell, Jane Girvan, Frances Cecilia McArthur, Eliza Curry, Sarah Curry.

Model School Class.—Lilis Litchfield Hoyt (winner of the Prince of Wales' Medal and Prize), Edward McManus, Ezra Ball, Mary Ann O'Brien, Whiting Rexford Ball, Mary Wilson, Malvina Rose, Selina Mary Cleveland, John Walter Brodie, Jane Ann Swallow.

Academy Class.—Anny Frances Murry, Mary Luella Herrick, Lucy Ann Merry, Isabella Rebecca Morrison.

University Graduates who have passed the examinations of the Academy Diploma.—Francis William Hicks, B. A., James D. Morrison, B. A., Walter McOuat, B. A.

DIPLOMAS GRANTED BY BOARDS OF EXAMINERS.

BOARD OF PROTESTANT EXAMINERS OF WATERLOO AND SWEETSBURGH.

1st Class Elementary (E.)—Misses Sophronia Benham, Emily L. Clement, Eliza Ann Higgins, Isabella Massie, Martha O'Brien, Mary Olmstead, Rosina Parent, Martha Ralston, Mary P. Wells, and Mr. Cyrus Thomas.

2nd Class Elementary (E.)—Misses Jane Boutwell, Adelia E. Fessenden, Samantha Horner, Miraette O'Dell, Florence A. Parker, Druscilla L. Prentice, Fanny Rodgers, Julia E. Smith, and Mr. Alpheus L. Jenne.

2nd Class Elementarg (F.)—Miss Sophronie Lassonde.

Sweetsburgh, May 2, 1865.

WM. GIBSON,
Secretary.

STANSTEAD BOARD OF EXAMINERS.

1*st Class Elementary* (*E.*)—Misses Esther P. Willey, Emily Sweeney, Ruth W. Chamberlin, Mary M. Williamson, Cynthia E. Bryan, Olive M. Cooper, Edith A. Dean, Theresa A. Webster, Fannie A. Hurd, Lestina P. Merry, Grace Fleming, Janette E. Martin, Ellen J. Daggett, Nellie M. Davis, Susie A. Jeck, Florence Hovey, Orphelia A. Orcutt, Sarah Elliott, Emiline V. Bean, Martha E. Cox, Amelia L. House, and Mary M. Hill.

2*nd Class Elementary* (*E.*)—Misses Judith Belknap, Hannah H. Rider, Fannie McGookin, Zeruah L. Parker, Olive A. Perkins, L. Maria Howe.

March 27, 1865.

C. A. Richardson,
Secretary.

BOARD OF EXAMINERS OF AYLMER.

2*nd Class Elementary* (*E.*)—Misses Margaret Cullin, Harriett Kellogg, Louisa Kellogg, Mary O'Keefe, and Mrs. Louisa Margaret Bolton McLean.

May 2, 1865.

John Woods,
Secretary.

BOARD OF EXAMINERS OF RICHMOND.

1*st Class Elementary* (*E.*)—Miss Elizabeth Howison.

2*nd Class Elementary* (*E.*)—Misses Betsy Ann Morrill, Betsy Selina Morrill, Elizabeth Maria McGinnis, Mary Johnson, Mary Leavitt, Sarah Emiline Husk, Elizabeth Esther Torrance, Maria Louisa Trenholme, Elizabeth Jane Ross, Ellen Rosalie McCaffrey, and Maria Eliza Hunton.

1*st Class Elementary* (*F.*)—Miss Humilaine Delisle.

2*nd Class Elementary* (*F.*)—Misses Emilie Peticlerc, and Lumina Cyr dit Vincent.

May 2, 1865.

J. H. Graham,
Secretary.

BOARD OF EXAMINERS OF BEAUCE.

1*st Class Elementary* (*F.*)—Misses Philomène Plante, Belzémire Nadeau, and Sédulie Bonneville.

2*nd Class Elementary* (*F.*)—Misses Rosalie Dorval, Dina Champagne, Adéline Lébreux, and Ezilda Grégoire.

May 2, 1865.

J. P. P. Proulx,
Secretary.

MONTREAL BOARD OF PROTESTANT EXAMINERS.

1*st Class Academy* (*E.*)—Mr. Alfred M. Lafferty, and Mr. John Rollit.

1*st Class Model School* (*E.*)—Misses Isabella Dowler and Victoria A. Scripture.

1*st Class Elementary* (*E.*)—Messrs. Kerr Anderson, Albert Fosburgh, Peter D. McIntyre, John J. Neely; Misses Mary Bangle, Eliza J. Bradford, Isabella J. Bradford, Amelia Fuller, Mary Hyde, Margaret O'Brien, Matilda M. Péron, Ellen Price, Mary J. Reeves and Margaret Thompson.

2*nd Class Elementary* (*E.*)—Mr. James H. Dixon and Mr. Solomon W. Young; Misses Martha Bell, Annie Caldwell, Elizabeth Clemon, Elizabeth C. Hart, Jane Reade, Elizabeth Stark and Miriam Walsh.

May 13, 1865.

T. A. Gibson,
Secretary.

BOARD OF EXAMINERS OF KAMOURASKA.

1*st Class Elementary* (*F.*)—Misses Adèle Emond, Sophronie Michaud and Marie Pelletier.

2*nd Class Elementary* (*F.*)—Misses Delphine Anctil, Damarise Béruhé, Sara Bélanger, Delvina Dufour, Ludivine Lebel, Marie Lebel, Marie Langlois, Justine Martin, Joséphine Paradis and Apolline Pelletier.

May 2, 1865.

P. Dumais,
Secretary.

QUEBEC BOARD OF CATHOLIC EXAMINERS.

2*nd Class Academy* (*F.*)—Mr. François Simard.

1*st Class Elementary* (*F.*)—Misses Sarah Brown and Eulalie Gosselin.

2*nd Class Elementary* (*E.*)—Miss Mary Jane Loughran.

2*nd Class Elementary* (*F.*)—Messrs. Thomas Gravel and Edouard Savard; Misses M. Angélique Allard, Célanie Bazin, Desanges Monique Bélanger, Delphine Bélanger, Séraphine Bernier, Odile Boucher, Apolline Dancausse, Hermine Délima Destroismaisons *alias* Picard, Sophronie Gourde, Luce Guay, Adélaide Lagacé, Alphonsine Larue, Adélaide Magnin, Hélène Eulalie Moreau, M. Célanire Morrisset, Joséphine Savard, Rose de Lima Tanguay and Victoire Turgeon.

May 2, 1865.

N. Lacasse,
Secretary.

MONTREAL BOARD OF CATHOLIC EXAMINERS.

2*nd Class Model School* (*F.*)—Mr. Amable Joseph Alphonse Allard (May 2, 1865).

1*st Class Elementary* (*F.*)—Miss Philomène Calvé *dite* Lagrave (*diploma granted June* 4, 1861); *F.*, Miss Elmire Roy, Miss Euphrosine Roy (*granted Feb.* 2, 1864); *E.*, Miss Ann Louisa Cronin; *F.*, Misses Odile Dupont and Marie Rose Ste. Marie (*Feb.* 7, 1865); *F.*, Misses Octavie Barrette, Marie Eliza Benoit, Rose Bergevin, Mme Blanchard (*née* Parmélie Rousseau), Misses Julienne Brassard and Pulchérie Chamberland; *E.*, Misses Ann Elizabeth Collum, Catherine Hayes, and Anna Power; *F.*, Miss Apolline Daigneau, Mme Daigneau (*née* Vitaline Buisson), Misses Rose de Lima Dalpé (Pariseau), Sophronie Alphonsine Desjardins, Louise Appolline Dubois, M. Louise Ducharme, Georgina Duguay, Augustine Dupuis, Marie Faber, Philomène Elvina Fleury, Scholastique Fontaine, Rosalie Galipeau, Philomène Gendron, Marie Rosina Godère, Malvina Guillette, Constance Hotte, Philomène Lacombe, Vitaline Labranche, Marie Vitaline Lalanne, and Vitaline Ledoux; *E. & F.*, Miss Catherine McCambridge, and Miss Mary McGarry; *F.*, Misses Sophronie McIntyre, Vitaline Mailot, Philomène Marchessault, Rosalie Marsolais (Lemire), Valérie Mathieu, Aglaë Meilleur, Rose de Lima Ménard, Adélaide Normandin, Rose de Lima Pagé, Elisabeth Pelland, Célina Plante, Rachel Perrin, Georgina Prud'homme, Virginie Robert, Marie Louise Rodrigue, Marie Algire St. Denis, Hermine Théberge, Edwidge Turcot, Salomée Viau, Marie Hermine Venne (Jean), Marie Louise Vigeant and Alphonsine Vincent; Mr. Louis Charles Octave Archambault and Mr. Adolphe Ménard (*May* 2, 1865.)

2*nd Class Elementary* (*F.*)—Miss Anne Charbonneau and Miss Emélie Cédulie Desnoyers (*Feb.* 7, 1865); *F.*, Rose Brault; *E.*, Misses Catherine Dolan, Mary Kennedy and Mary Ann Sullivan; *F.*, Misses Malvina Duclos, Hermine Durocher, Angélique Giraldeau, Anastasie Laurier, Rose Laframboise, Célina Martel, Marie Angèle Millette, Marie Philomène Poirier, Adelphe Célina Proulx, Adélaide Sabourin, Léocadie Séguin, Virginie Séguin, Cornelie Séguin, Elizabeth Virginie Talbot, Aurélie Tougas and Angélique Usereau, and Mr. Paul Authier. (*May* 2, 1865.)

F. X. Valade,
Secretary.

QUEBEC BOARD OF PROTESTANT EXAMINERS.

1*st Class Elementary* (*E.*)—Mr. Charles McCutcheon, Miss Margery McKillop and Miss Catherine McKillop.

2*nd Class Elementary* (*E.*)—Mr. John Donaghy, Mr. Peter McKinnon, and Eliza Jane Robinson.

May 2, 1865.

D. Wilkie,
Secretary.

JOURNAL OF EDUCATION.

MONTREAL (LOWER CANADA), JUNE AND JULY, 1865.

Laying of the Corner-stone of the New High-School at Quebec.

The ceremony of laying the corner-stone of the new High-School Building was performed yesterday afternoon, by His Excellency the Governor-General, with all the pomp and ceremony usual on such occasions. The site of the new construction is in St. Denis street, Cape, immediately adjoining the old school building; and we think it will be generally admitted that a more desirable locality, in every respect, could not have been found within the city walls. The continuous rain of the last week had to a great extent retarded the preparations for the laying of the stone, and the arrangement made for the reception of persons invited was in consequence not what it would otherwise have been. When, however, we consider that only a few hours' fine weather intervened between the cessation of the rain and the time fixed for the ceremony, it is only surprising that so much was accomplished; and those who had charge of the arrangements deserve credit, on the whole, for the amount of work which they were enabled to perform within such a short space of time. A raised platform,

covered with seats, extended the whole length of the foundation. In the centre there was a sort of dais, raised still higher, for the accommodation of His Excellency and staff, the Rector, and Professors of the school, the directors, members of the building-committee, &c. From flag-staffs at each corner of this platform waved the British and other flags. Immediately in front was the corner-stone, ready to be lowered into its place.

Shortly before three o'clock those who had received cards of invitation from the building-committee began to arrive, and at the hour appointed nearly all the seats were occupied. Among those present were many of our most respected citizens, and a very large number of ladies. The street in front of the building was crowded with spectators. A small temporary construction immediately opposite was occupied by the band of the 7th Royal Fusiliers. The weather during the afternoon was most delightful, and in every way favorable to the success of the ceremony.

At three o'clock, His Excellency the Governor General arrived, attended by his private secretary, Mr. Denis Godley, by Col. J. G. Irvine, Provincial Aide-de-Camp, and by Capt. Pemberton, 60th Rifles, A. D. C. The band struck up the national anthem, and Her Majesty's representative was received with every mark of respect by the persons present. His Excellency was escorted to the dais by the Rev. Mr. Hatch, Rector, and the professors of the school, in academic costume, the members of the building-committee, several clergymen, &c. On His Excellency taking his place, Mr. H.S. Scott approached, and on behalf of the committee, briefly thanked His Excellency, in appropriate terms, for the courteous manner in which he had acceded to their wish by consenting to lay the corner-stone of the new school.

Everything having been pronounced in readiness, an appropriate prayer was offered by the Rev. G. Vernon Housman, Rector of Quebec, and His Excellency stepped down off the dais, and advanced to the stone where he was received by Mr. E. Stavely, architect, and by Mr. Jos. Archer, senr., builder, who handed His Excellency a silver trowel. The stone was first raised, and mortar having been placed in the bed, it was lowered to its position. The level was then applied to each angle, and His Excellency taking the mallet gave a few taps on each corner, amid the cheers of the assembled spectators. The Rev. Mr. Hatch, Rector, then handed His Excellency a sealed glass case containing a parchment scroll bearing the following inscription : —

This corner-stone was laid by His Excellency Lord Monck,
Governor General of Canada, &c.,
Wednesday, May 31st. 1865.
Chairman of Board of Directors :—Rev. Jno. Cook, D. D.
Rector :—Rev. Edwin Hatch, B. A.
Secretary :—D. Wilkie.
Architect :—E. Stavely.
Builder:—J. Archer, senr.
LAUS DEO !

The case contained, moreover, a copy of the centenary number of the *Quebec Gazette*, June 1864 ; a copy of Tuesday night's *Mercury*, a copy of yesterday morning's *Chronicle*, and a number of coins of the present reign. This His Excellency placed in the cavity of the stone, and then resumed his seat on the platform.

His Excellency, addressing those present, said it afforded him much gratification to take part in the ceremony of to-day, because it gave him sincere pleasure to be enabled to evince his sympathy with an object which was deemed important by the citizens of Quebec, and because, also, it gave him an opportunity of expressing the deep interest he felt in the spread of educational facilities among the people of this Province, and more especially of that particular class of education to which the building—the corner-stone of which had just been laid—was to be devoted. He was, however, impressed with the idea that it was not necessary for him to say much here on the great importance of education. It was not the least creditable feature in the administration of the public affairs of the British North American Provinces, that such ample provision, such munificent grants, had been made in favor of popular education. Nor did he confine his remarks in this respect to those countries which still continued their connexion with Great Britain. The same observation extended in its fullest sense to those States which had severed that connexion, for he believed it was truly stated that in no country in the world was there a more general diffusion of educational training than in the neighboring, or Northern States. He would not, as he had already stated, take up the time of his hearers by commenting upon the general benefits of education ; but there were, however, one or two points connected with the bearing of the advantages of education on the administration of public affairs, to which he might devote a few words. There were, in the first place, the vast advantages of education in connexion with the industrial resources of the country. We have resources, but they are only partially developed. By means of education we might hope to bring to the work of that development all the advantages of superior intelligence and recent scientific discovery. Even in the lowest description of handicraft, the educated man enjoyed a vast advantage over his uneducated competitor, and what was true of the lower was also true of the higher branches of industry. The second important consideration bearing upon the importance of popular education, was this :—there were few countries, indeed, where the influence of the great mass of the people acted more directly upon the administration of public affairs than this country. Therefore, the people ought to be able, by means of educational training, to avail themselves, in an intelligent manner, of the great power and privilege placed in their hands. No person could have watched carefully the great events which have transpired during the last four years, in the neighboring country, without at once seeing and understanding how thoroughly the great mass of the people there comprehended the object at issue, the wonderful tenacity with which they adhered through all dangers and difficulties to the pursuit of that object, the many sacrifices they made, and the ready obedience which they paid to their leaders. He believed these results were mainly due to the great extent to which education had permeated all masses of the community and to the vast spread of educational information among them. This had proved the means of carrying that nation through a condition of war, and he was satisfied that it would also afford the best guarantee for the continuance of that state of peace and friendship which, in the language of their President (he was not sure as to the precise words, but such was the meaning,) ought, in the best interests of civilization, to exist between the two great branches of the Anglo-Saxon family. He was rejoiced to observe the proposed extension of this institution. In our age, no advantage of wealth nor birth could allow men to continue in a position of leadership among the people, unless they could vindicate their claim to superior intelligence based upon a thorough education ; and he was therefore glad to see that they manifested such a proper appreciation of those qualities which suited men to the rank of leaders of the people. Holding these views, it afforded him very great pleasure to lay the corner-stone of their new High School, and he sincerely trusted it would long continue to confer benefits on the citizens of Quebec. (Loud cheers.)

Hon. Mr. Chauveau, Superintendent of Education for Lower Canada, spoke next. He said that the highest sanction which could be given by the State to this undertaking had already been given by His Excellency the Governor-General. Anything which he (Mr. Chauveau) might add, in his official capacity, would therefore be purely superfluous. It was, therefore, rather as an old Quebecer, as one who took an interest in the establishment and development of all scholastic and literary institutions, that he attended, and would address them a few words on this occasion.—After some brief observations in reference to the very auspicious change in the weather which had taken place, the hon. gentleman went on to say:—The event now transpiring brought him back to the days of his youth, when this institution was carried on under the modest name of a school by the late Dr. Wilkie, whose name was still so worthily represented here by a gentleman connected with it—it carried him back, he repeated, to those days, and it afforded him, as Superintendent of Education, and as an old Quebecer, great pleasure to see that the institution was now assuming a development worthy of its high purpose. There were, no doubt, many obstacles in the way of superior education in this country—obstacles which might be said to be founded on a double prejudice. For instance, some believed that classical studies were calculated to unfit young men for the common business of life ; while others believed that wealth was so powerful in itself that it might dispense with learning. Some considered it an impediment ; others looked upon it as a mere useless ornament. These prejudices had no solid foundation. He failed to see why classical studies and sound business capacities could not go together. As the French said, *l'un n'empêche pas l'autre.* We had many practical examples of the most convincing nature in England at the present day. When we saw a statesman like Lord Derby publishing a translation of Homer—when we saw the first financier of the age, Gladstone, giving to the world works on Greek, Latin, and English authors—when we found the same eminent man illustrating almost every one of his speeches, even those on financial questions, with classical quotations—when we saw men like these, high in the councils of state, becoming literary men in their hours of leisure, he thought practical men need not and ought not to despise literature. There were, of course, other causes at work in the way of superior education. In the case of parents of fortune, it sometimes happened that their children did not leave school early in life in order to enter upon active mercantile affairs, but on the contrary to lead a life of idleness. This had a baneful effect—not only weakening parental ties, but marring all prospect of future success or advancement in the world.

In conclusion he (Mr. Chauveau) had only to congratulate most heartily the Rector, Mr. Hatch, and his colleagues; and to express his firm hope that the citizens of Quebec would appreciate their exertions, and that the High-School would effect that amount of good which, as a feeder of Morrin College, it was in such an excellent position to effect. (Cheers.)

Rev. Mr. Hatch, Rector of the High-School, said he would have remained silent, but that he felt it to be his duty to express on his own behalf, and on that of his associates, the deep satisfaction which the presence of His Excellency and of such a large assemblage of citizens on this auspicious occasion, afforded them. His Excellency had pointed out, in words which would long be remembered, the many benefits to be derived from such institutions; but he (Mr. Hatch) would say that the presence of His Excellency and of this distinguished assemblage would be one of the surest means of securing those advantages, inasmuch as it shewed that those who were engaged in the task had the moral support of the community. (Cheers.) It was not enough that they should have splendid buildings and zealous professors—the managers should feel, in order to succeed, that they had with them, in their work, the good-will of the community. Without that support the institution would not deserve the name of a public school; but with such support it would achieve, in the same sphere of action, that which had been done by the public schools of England towards forming the English character. (Cheers.) Within the last twenty years the High-School of Quebec has been enabled to send forth hundreds of young men to fill the most honorable places in the community, because it had the moral support of the people of Quebec; and he felt that it was right to say that this moral support was due in a great degree to the zeal, to the ability, to the clear-sightedness of one whose absence from our midst we all regretted. (After one or two remarks which were inaudible where the reporter stood, the reverend gentleman continued:—) He would say for himself and for his coadjutors that they would do their best to render this institution a benefit and a blessing to the community; and to the boys—many of whom would be able to point to this as one of the public buildings of Quebec long after their teachers had passed away—he would say that it remained for them to shew, by their assiduity, by their attention to their duties, and by their conduct in after life, that it was worthy of the noble auspices under which its foundation was laid, worthy of Quebec and its citizens, and worthy of this great country. (Loud cheers.)

The Rector's discourse closed the proceedings. His Excellency, however, remained for some time in friendly conversation with the Rector and Professors, the Rector of Quebec, the directors and members of the Building Committee and other gentlemen around him. A ground-plan and elevation of the new building was produced, in which His Excellency appeared to take a great deal of interest.

About four o'clock, His Excellency and staff left—the band of the Royal Fusiliers playing an appropriate air—and the crowd of spectators dispersed.—*Quebec Chronicle.*

Annual Convention of the Provincial Association of Protestant Teachers of Lower Canada.

(*From The Montreal Witness.*)

The annual convention of the above association met in the picturesque town of Sherbrooke on Thursday, the 1st inst., and continued its session through that and the following day. A large number of teachers from the surrounding district, with no inconsiderable additions from other parts of the Province, assembled on the occasion, and much interest in the proceedings was evinced by the inhabitants of the town. Among the more prominent persons who were present at, and took part in the proceedings we may instance the Hon. P. J. O. Chauveau, Suprintendent of Education; Hon. J. S. Sanborn, M.L.C.; C. Dunkin, Esq., M.P.P.; J. G. Robertson, Esq., Mayor of Sherbrooke; Dr. Dawson, Principal of McGill College; Professors Miles, Dodwell, and Roux, of Bishop's College, Lennoxville; Principal Graham, of St. Francis' College, Richmond; Prof. Hicks, of the McGill Normal School; Mr. Inspector Hubbard, Revs. A. Duff, C. P. Reid, E. J. Sherrill, and others.

In the absence of the President, the Rev. Dr. Nicolls, from the country, Dr. Dawson, one of the Vice-Presidents, was elected to fill the chair, who called on the Rev. A. Duff to open the proceedings with prayer. A code of by-laws of order, and order of proceedings, which had been prepared by a committee previously appointed for that purpose, was submitted, and, with slight alterations, and reservations, adopted. The forenoon session having been thus occupied, the afternoon session was devoted principally to the reading and discussion of an able and exhaustive paper, by Professor Hicks, on "Apparatus essential or desirable for an elementary school," of which, however, it is not possible to give, within our limits, more than the briefest possible abstract. The lecturer first alluded to that indispensable piece of apparatus, the blackboard, detailing its various uses in teaching arithmetic, grammar, and composition, writing, spelling, and geography, as well as in giving object lessons. Afterwards he passed in review maps, globes, the mariner's compass, orreries, and tellurians, the ball-frame, the fractograph, models of solids, and the foot-rule; insisting on the one hand that no school can attain the highest degree of efficiency where these are wanting, but on the other pointing out that apparatus alone will not make a good school. He concluded by showing the advantages that might result from the establishment of a school depository and of a school museum.

In the course of an interesting discussion of the paper, Mr. Inspector Hubbard spoke of the lamentable lack of school appliances in the 230 schools of his district. The Hon. Mr. Sanborn spoke of the necessity of supplying the deficiency of costly apparatus by ingenious contrivance, but further insisted that the great object to be obtained in school was such a development of the mental powers as should give the ability to comprehend the abstract. In pursuance of the same subject, Dr. Dawson referred to his experience in Nova Scotia as Superintendent of Education, and, alluding to the lack of adequate appliances even for university instruction, said that contrivance and labor were everywhere necessary; and so in accumulating a museum to aid him as a teacher of Natural History, he had to wade for it in rivers and seas, to dig for it in the earth, to climb for it on mountains, to hammer it out of rocks, to carry heavy burdens, and to travel weary miles. He then introduced the subject of communication with the two other provincial associations, those of Upper and of Central Canada. After the views of the convention had been elicited, it was resolved to appoint a committee to report on the subject on the ensuing day.

The session, however, which elicited most popular interest, was that of the evening, and which was addressed by Dr. Dawson, Hon. Mr. Chauveau, M. Dunkin, M.P.P., and Hon. Mr. Sanborn.

In assuming the chair, Dr. Dawson remarked that the occasion was an important one, that though a previous convention had been held at which the association was inaugurated, yet this was the first regular convention under its constitution. After detailing the steps by which this association, emulative of similar organizations in the States, had reached its present dimensions, he said that we were now about to seek alliance with kindred associations in Upper and Central Canada, in the hope that at no distant date this might issue in the formation of a general Canadian association, which again might in lapse of time look forward to a grand educational confederation of British North America. He further said that this was emphatically an association of teachers, and concentrated its attention upon the teacher as that essential to education, without which all other means and appliances fail. It regards him in many relations: in his professional character as educated, earnest, improving; in relation to the means placed at his disposal, the facilities for professional training, the books and apparatus with which he is supplied; in relation to his employers as maintained by them, countenanced by them, and yet allowed unfettered freedom for good; in relation to the government as submitting to its control, and yet agitating educational reforms, receiving from government, not only pecuniary support, but, what is of paramount importance, suitable provision for system and supervision; in relation to his pupils—a relation in which all others are embraced, and in which his duty is to develope each individual mind so as to make it the best possible for its owner and for the world. He concluded with Paul's advice to Timothy: "The servant of the Lord must not strive, but be gentle unto all men, apt to teach, patient, in meekness instructing those that oppose themselves."

Hon. Mr. Chauveau said, that having so frequently expressed himself heretofore on other topics at similar meetings, he here simply wished to express his sympathy with and good feeling towards all teachers, and the more so that others, influential by talent and position, were to succeed him. Teachers' associations were not of recent date in Lower Canada. They had been organized under the administration of Dr. Meilleur, though they remained in a languishing condition until reorganized at the time of the establishment of Normal schools. He said that one advantage of such organizations was the enticing of persons of influence and position to meet teachers and consult respecting the intellectual needs of the people. The hon. gentleman then referred to the subject of school appliances discussed in the afternoon, especially referring to a number of maps of Canada which were available, but stating that the Educational Department did not now feel itself in a position to establish a depository of school requisites.

C. Dunkin, Esq., M.P.P., then addressed the meeting, disclaiming any idea on the part of himself and Mr. Sanborn, that they came to

enhance the dignity of the Association. While admitting the necessity of raising the teacher's office to the rank of a liberal profession, he felt that this must be done by the teachers as a professional body. One great reason for the low position which teachers occupied, was to be found in the temporary character of the outer court of the Gentiles, through which they passed to reach the inner temple of their life's labor. The teacher's office must be permanent, and to this end must be remunerative. Teachears must claim such a position, and must qualify themselves to fill it. This association can claim such a position, and while teachers of all grades thus unite, we can remember we are members of an honorable profession. We must not rely too much on legislation. We want from the legislature in the main what Diogenes in his tub required of Alexander: "Stand out of our sunshine." It is well perhaps, for the present, that it should afford to schools some pecuniary assistance, but this only as a means of securing the power to supervise the school system, and encourage the efforts of the people. We do not wish to have that perfection of legislative interference which makes all schools alike, but, rather, we require that people should be put upon their mettle to do the best that they can for themselves; learning through trial, failure and success how to improve. In short, the less the law does, if the community will do it, the better.

Hon. Mr. Sanborn said he had been a resident in Sherbrooke twenty-three years, the first three having been spent in teaching; and if he had not been eminent for his abilities, at least he felt that this had been one of the most useful portions of his life. He must acknowledge that there were here many discouragements to the educator. We were a people divided in race, in tongue, in religion. Some one complaining of his country once, said that there was no liberty in it. "Why," said a by-stander, "can't you do as you will?" "Yes," was the reply, "but then I can't make other people do as I will." And the speaker thought that this could not be done educationally. Compromises make laws: one man gives up one thing, another something else, and all get protection. So too we must get education through compromises. The genius of the age demands that the whole community shall be educated; for its institutions, conferring large franchises, involve the necessity of educating the people up to their privileges. But we have in this work our encouragement. Progress has been achieved. Twenty years ago it would have been impossible to gather a Convention such as this. When the school law was provided, it encountered great opposition; but now that is overcome, and the law is ameliorating. The establishment of this Association is cause of congratulation. The public are aroused; and teachers encouraged by their countenance, and refreshed by their sympathy, return to their labors more vigorous and more successful. Teachers have a great work to do as missionaries sent forth into the community. Their work is of interest to all; but the labors of professional life too frequently crowd out all notice of it by others, unless when forced upon the attention; but the teacher has it as his peculiar vocation and life-work to raise the tone of public sentiment in relation to this subject. In conclusion, it must be admitted that our divided educational interests are a great drawback and discouragement; but since we cannot act together, let us each improve in our own line, and act, each in our own way, to the same end, and travel by separate roads to the same goal.

The session of the next day was presided over by Mr. Inspector Hubbard; and the forenoon, in addition to a resumed discussion on by-laws, was occupied by a valuable and suggestive paper by Prof. Dodwell, of which we regret we cannot furnish an abstract. In the afternoon, Mrs. Hammond, of Richmond, read a paper containing valuable hints to teachers. Principal Graham delivered an address of considerable length, in which he referred to about all the subjects of common school education, and the Secretary offered a few remarks on teaching writing. Our space, however, forbids us to allude further to the exercises.

The ballot for officers resulted in the election of Dr. Dawson as President, Prof. Robins as Secretary, and Mr. McGregor as Treasurer. After passing votes of thanks to the officers of the past year, to the inhabitants of Sherbrooke for their hospitalities, and to the Grand Trunk for the facilities for travel accorded to them, the Convention was adjourned to meet again in this city in the latter part of August, 1866.

Twenty-sixth Conference of the Teachers' Association in connection with Jacques-Cartier Normal School.

This Convention was held on the 25th and 26th May last.

Present: Honorable Superintendent of Education, Rev. Principal Verreau, Inspectors Grondin and Caron, Mr. U. E. Archambault, President; Mr. J. E. Paradis, Vice-President; Mr. J. O. Casgrain, Secretary; Mr. D. Boudrias, Treasurer; Messrs. Emard, J. B. Priou, A. Dalpé, Members of the Committee; Messrs. A. Gervais, H. Bellerose, A. Chénevert, M. Guérin, A. Malette, C. Brault, D. Olivier, S. Boutin, A. Dupuis, G. Martin, S. Aubuchon, L. Réné, N. St. André, N. Desjardins, H. Paladeau, F. Lavoie, R. L. Fortin, O. Dupont, J. Bourgeois, L. Terner, L. A. Auger, O. Hébert, H. T. Chagnon, H. C. Chagnon, H. R. Martineau, F. X. Mousseau, F. Gauvreau, C. Lefebvre, L. O. Donoghue, L. O. Ryan, M. Molleur, C. H. Paradis, C. Guimond, A. Lanctôt, &c., and the pupil teachers of the Normal school.

On the first day the chair was taken at 7:30 p. m.

Mr. Boudrias opened the proceedings with a lecture on *Mental Arithmetic*, in which, after alluding to the origin of this science and the place where it was first brought to light, he proceeded to show that its successful application depended on certain rules from which there could be no deviation, especially if the process was to be gone through methodically.

Rev. Mr. Verreau lectured on *Natural Philosophy*, and explained the laws of motion, showing that motion is the only condition in which bodies can exist. The subject was illustrated by experiments.

SECOND SITTING.

On the following day the teachers attended mass in the chapel of the Normal School, at 8 a. m., on which occasion the Rev. Mr. Verreau addressed them on the special nature of their calling, which, he said, was of Divine origin.

At 9 a. m., the meeting having been opened by the President, and the minutes of the last meeting read and adopted, the election of office-bearers for the year was proceeded with, and resulted as follows:

Mr. J. E. Paradis, President; Mr. M. Emard, Vice-President; Mr. J. O. Cassegrain, Secretary; Mr. D. Boudrias, Treasurer; Mr. G. T. Dostaler, Librarian; Messrs. J. B. Priou, H. C. Chagnon, A. Dalpé, H. Martineau, H. Bellerose, J. Destroismaisons, Committe. Mr. C. Ferland was named Assistant Librarian by the Principal.

Before leaving the chair Mr. Archambault read a summary of the work done during the year. A glance at the minutes would show, according to his recapitulation, that the results were as favorable as those obtained in previous years, and that the lectures, papers and essays were remarkable for learning and the pains bestowed on them by contributors. The list is as follows: Lecture on *Natural History*, by Principal Verreau; Paper on the Difficult but Sublime Task of the Teacher, by Mr. Verreau; Report on the Labors of the Association from its Commencement, by Mr. Archambault; Lecture on *The Necessity of Labor*, by Mr. Paradis; Essay on *Intuition*, by Mr. Cassegrain, and another on the History of Canada, by Inspector Valade.

Four subjects only had been submitted for discussion, viz:

1. *What is the best method of teaching aliquot parts?*
2. *Is it preferable that French verbs should be taught from the primitive tenses or from their radicals?*
3. *Can the rules of the past participle be reduced to one? and if so, would it be advantageous to teach the past participle to children from this single rule?*
4. *What are the different branches that should be taught in elementary and in model schools, and how far should the study of such branches be carried?*

Although the number of subjects discussed was less than in former years, he (Mr. Archambault) was persuaded, from the earnest manner in which they had been debated, that much useful and practical knowledge had been elicited.

The committee of management had, of course, performed its share of the work thus accomplished, having held three regular meetings preparatory to each convention during the year, besides an extraordinary session, at which it was decided that a special committee should be named for proposing theses to the teachers. Mr. Archambault then made some remarks on the advantages to be derived from these conferences, insisted on the importance to teachers of studying works on the art of teaching, and thanked the Association for the honor conferred in having appointed him President.

Mr. Paradis spoke in terms of praise of the presidency of his predecessor, and said that as the office had now devolved upon him, he (Mr. Paradis) would do all in his power to deserve the approbation of his fellow-members.

The Hon. Superintendent of Education having also complimented Mr. Archambault on the able manner in which he had discharged his duties as President, expressed himself highly gratified at finding a large number of the teachers present, particularly of those who had been in training in the Normal School, and availed himself of this opportunity to again call upon the whole body of teachers to subscribe to the *Journal* of Education, and especially to the Savings Fund, as to this means of subsistence in times of difficulty many would have to look for support. He strongly advised teachers to persevere in their calling, reminding them that they had a better chance for promotion at present than formerly; he would, he added, on all occasions use

his best endeavors with the Government to cause teachers to be appointed to inspectorships. The measures taken by the Department of Education for preventing any reduction in teachers' salaries were then adverted to, as also the influence which the teacher possessed over his neighbors in the parishes — an influence which, said Mr. Chauveau, should be exerted to the utmost in preventing the wholesale emigration now unfortunately going on. After further remarks on this subject, the Superintendent advocated the teaching of the History of Canada in all the schools, as one of the means calculated to develope in the rising generation that love of country which would more firmly root it to the soil.

Mr. Bellerose then read a paper on *Heat.*

A discussion followed between Mr. Emard and Mr. Priou on *The best method of teaching Simple and Compound Proportion.*

Mr. Paradis, in a review of the question, expressed the opinion that although the usual systems of proportion had their merit, the analytic system was preferable, inasmuch as, while requiring more profound reasoning on the part of the pupil, the operation itself was more simple.

An essay on *The last moments of Kondiaronk,* the famous Huron chief, was read by Mr. Boutin ; after which

The relative merits of Bonneau's French Grammar and that of the *Brothers,* came up for discussion. In the debate that followed, Messrs. Paradis and Archambault expressed themselves, on the whole, in favor of Bonneau's.

Mr. Priou read an essay on *The Teacher,* in which he said that happiness consisted in a teacher's faith in God, confidence in himself and his calling,—which aimed at the moral, intellectual and physical excellence of his pupils,— and in the hope of that reward which awaits those who willingly devote all their powers of body and mind to instructing their fellow-creatures.

It was resolved, on motion of Mr. Emard, seconded by Mr. Cassegrain, that the *conference* intended to be held in September, should take place in August.

A vote of thanks was, on motion of Mr. Emard, seconded by Mr. Chagnon, tendered to Mr. Archambault and the other office-bearers, for having filled their respective offices with advantage to the Association and honor to themselves.

On motion of Mr. Boudrias, seconded by Mr. Paradis, it was resolved that the Librarian should be authorized to buy six copies of the excellent treatise on *Teaching* by Rev. Mr. Langevin.

On motion of Mr. Archambault, seconded by Mr. Cassegrain, a vote of thanks was tendered to the proprietors of *La Minerve* and of *L'Ordre* for having published advertisements for the Association gratis.

The Treasurer's accounts were received and approved.

Resolutions based on the report of the committee of management, were also adopted, as follows :

1. That a committee be named for *proposing, correcting, and crowning* essays, which shall be open to the competition of all the teachers belonging to this Association.

2. That the following members compose this committee : The Principal of the Jacques Cartier Normal School, as Chairman, with power to choose a professor of said school as assistant ; one inspector of schools and one teacher, members of this Association, the two last to be elected annually by ballot at the general election in the month of May.

3. That the competition shall take place only once in the year.

4. That the theses shall be proposed and published at the convention held in May in each year, and deposited in the hands of the Principal of Jacques Cartier Normal School, at the conference of the ensuing month of January at the latest.

5. That each *thesis* shall be transmitted under a fictitious name, or motto, the author sending also a sealed letter having for superscription the same name or motto as the thesis and giving within his true name. This letter shall be opened only at the *conference* in May, and then only in the event of the thesis being crowned.

6. That the committee shall award a prize to the author of the thesis thus crowned ; and when two theses shall be equal in merit, the prize shall be divided.

7. That every crowned thesis shall be preserved in the archives of the Association.

Inspector Valade and Inspector M. E. Archambault were appointed members of the said committee.

Messrs. H. Pesant, P. P. Auger, H. Martineau, J. B. Delâge, A. Gervais and C. Brault were requested to prepare each a lecture for the convention in August next.

The following subjects will be discussed: "Should children be taught to define the rules of arithmetic, or is it sufficient that these rules be explained to them ? Is Poitevin's French grammar preferable to Chapsal's ?

Then, on motion of Mr. Boudrias, seconded by Mr. Gauvreau, it was resolved that the next meeting should be held on the last Friday in the ensuing month of August, at 9 a. m.

McGill Normal School.

DISTRIBUTION OF DIPLOMAS.

The annual meeting of this school for the distribution of diplomas to the teacher-pupils was held on Friday afternoon, the Hon. P. J. O. Chauveau, LL. D., Superintendent of Education for Lower Canada, presiding.

On and near the dais were Professor Dawson, LL. D. F. R. S., Principal and Associate Professor of Natural History and Agriculture ; Rev. Canon Leach, Vice Principal ; Hon. James Ferrier, and B. Camberlain, M. A, B. C. L., Fellows, Members of the Corporation of the University ; Rev. Messrs. Bond, Kemp, Muir, and Cordner ; also, Professors Howe, Hicks, Robins, Craig, and W. C. Baynes, Esq., B. A ; and Messrs. Lunn, McGregor, B. A ; Murray, and Andrews.

The Rev. Mr. KEMP opened the proceedings with prayer.

Hon. Mr. CHAUVEAU then addressed the meeting, observing that he believed this was the eighth distribution of prizes and diplomas to the teachers in training at the McGill Normal School. He understood that the usual number would be distributed on this occasion. In addition, they would give what had always been offered since it was founded, the medal and prize presented by His Royal Highness the Prince of Wales. The prize was one which had not only to be obtained by the relative success of one pupil over the others, but by an absolute degree of success. That was to say, the pupil who obtained the medal and prize must not only exhibit superiority over the other pupils, but attain to a certain standard in the final examination. So it had happened that the prize had not been given sometimes. For the diplomas themselves, a very strict examination had to be gone through. It was almost necessary for him to call the attention of the public to the good work done by this school, and although the attendance that day was not so great as it had been on previous occasions, still he might argue from the increasing applications from the country parts, that the people of the country were taking a great interest in this school. The superiority of the pupil-teachers who left it was everywhere acknowledged. He had only to return to the Principal and his co-adjutors his thanks for the good work they were doing. The curriculum of the school was so large, and the subjects so important, that every one must see at the first glance that a great deal of labor was necessary, and that the whole time of the teachers was occupied. The examinations were very strict; and as a consequence, there was a general attention to duty. To those who got diplomas he had only to say, that they would always secure to them some of the best places in the profession of teaching in Lower Canada. Still they must not think that everything was done when they received this diploma. He who did not aim at continuous success was sure to go back. The teacher had to learn something every day. It was just the elements of each branch they learned at the Normal School ; just enough to place them in such a position that they could improve themselves by their own exertions afterwards, having the key of every science they would have to teach their pupils. But it was only by giving their undivided attention to their calling that success could be attained. For his own part, he had watched carefully the efforts and success of the pupils from the Normal School, and although some of them, owing to the small salaries received, have given up education, yet a great majority of them had taught the three years prescribed by the regulations, and a majority of them had also continued teaching afterwards. They had his best wishes for their success. They had not come there by compulsion ; they had not come as children obliged to fulfil a certain course ; but they were there of their own free will, to follow out a noble profession —one in his opinion, and in that of everyone who had given some attention to the subject, ranking only after the ministry. (Applause.) There was every reason, therefore, to believe, that having taken that determination beforehand, they would follow out their course of study, resolved to be successful. As far as his ministerial duties were concerned, they would always find in him one to guide, help, and protect them. (Hear, hear.) Some of them would only receive the elementary school diploma ; but if they took his advice they would remain one year more and take the model school diploma.

Principal DAWSON, in introducing the list of teachers in training presented for diplomas, stated that in the past session the number of students had been 65, and that though this number was not quite so large as in some previous years, the class had been of more than average quality in point of talent and preparation. At the close of the examinations, which were very severe, and had continued for three weeks, four students had taken the Academy diploma, ten the Model

School diploma, and 26 the Elementary School diploma. Three graduates of McGill University had also taken the Academy diploma under the special regulations for that purpose. The most important new feature in the past session had been the institution of a course of study of the Academy diplomas. This had given completeness to the courses of the school, and will enable it to send out a higher grade of teachers, fitted to train young men for college. He hoped that the additional advantages thus offered would induce a large number of young men to enter the school, though, if young women alone should enter for the academy diploma, an essential service would thereby be rendered to education. He had to thank Mr. McGregor of the Model School for his services in giving the classical instruction to the Academy and Model School classes; and also Profs. Hicks and Robins for their willingness to undertake the entire work of the Academy class.

He then read the list of diplomas and honours as follows:—

Elementary School Class.—Elizabeth Martha McMurtry, of Bowmanville, honorable mention in grammar, geometry, chemistry, natural history, vocal music; Lucy Maria Gillies, of Eaton, honorable mention in geometry, French; Sarah Ann McBain, of Montreal, honorable mention in arithmetic and book-keeping; Mary Emily Lynch, of Danville, honorable mention in algebra; Matilda McCrae, of Elgin, honorable mention in natural history, book-keeping and French; Mary Ann Ada Munroe, of Stormont; Maria Jane Cameron, of Cookshire, honorable mention in book-keeping; Elizabeth Henry, of Montreal; Jemima Thompson, of Montreal; Eliza Higgins, of Montreal; Elizabeth Boa, of St. Laurent; Jane Baillie, of Montreal; Louisa Theresa Coates, of Sherbrooke; Elizabeth Jane Kissock, of Montreal; Melissa Urquhart, of Lancaster; Sarah Alfreda Whittle, of Huntingdon; Selina Frances Sloane, of Montreal; Marion Lucy Warren, of Montreal; Mary Saunders, of Montreal; Fanny Noble Erskine, of Granby; Ann Scott, of Lancaster; Mary Ann Bell, of Shawbridge; Jane Girvan, of Galt; Frances Cecelia McArthur, of Riceville; Eliza Curry, of Oshawa; Sarah Curry, of Oshawa.

Model School Class.—Lillis Litchfield Hoyt, of Magog, honorable mention in grammar, composition, mensuration, algebra, geometry, Latin, agriculture, natural history, elocution, French—Prince of Wales' medal and prize; Edward McManus, of Rawdon, honorable mention in mensuration, arithmetic, algebra, geometry, agriculture; Ezra Ball, of Bolton, honorable mention in grammar and agriculture; Mary Ann O'Brien, of Montreal, honorable mention in algebra; Whiting Rexford Ball, of Bolton, honorable mention in grammar, geometry, agriculture; Mary Wilson, of Montreal, honorable mention in vocal music; Malvina Ross, of Lingwick, honorable mention in agriculture; Selina Mary Cleveland, of Danville; John Walter Brodie, of Lochiel, honorable mention in composition; Jane Ann Swallow, of Montreal.

Academy Class.—Amy Frances Murray, of Montreal, honorable mention in moral philosophy, trigonometry, geometry and French; Mary Luella Herrick, of Granby, honorable mention in trigonometry and solid geometry, analytical geometry, differential calculus, Latin, Greek; Lucy Ann Merry, of Magog, honorable mention in moral philosophy, astronomy and natural history; Isabella Rebecca Morrison, of North Georgetown, honorable mention in natural history.

University Graduates who have passed the examinations for the Academy Diploma:—Francis William Hicks, B. A, James D. Morrison, B. A, Walter McOuat, B. A.

Miss Herrick now read a valedictory, characterised by good taste and feeling, and admirably expressed.

Prof. Hicks addressed the retiring pupils, laboring under considerable emotion. He was understood to say his mind was occupied by conflicting feelings. On the one hand he was much pleased to find so many of the students had been successful this session, while, on the other, he was sorry to part with many whom he for some time had been in the habit of meeting daily.—There was one pleasure connected with the work, and that was, that it was not finished here, but would still be carried on in different parts of the land, and that they might have further intercourse in the future. He trusted that wherever the large number of our students who leave us yearly went, they were proving that the one great means of advancing education in the country was to train the teachers properly. The object of the teaching imparted in this institution was to prepare young persons for the education of youth. The Professor, from his long experience as a teacher in England and in Canada, now proceeded to enforce the importance of the educator's work, and offer some excellent counsel designed to promote the temporal and spiritual well-being of the pupils, and make them successful teachers. In order to the latter, he strongly urged them to a love of their work, to devotion thereto their whole heart and best energies, and concluded a very able and kindly address (for a fuller report of which we regret we have not space) by congratulating the pupils upon their success.

Rev. Mr. Bond spoke next. He said:—I feel that I am using a mere truism when I say that the Normal School has conferred one of the greatest blessings upon this country. Nevertheless it is a truth that ought to be repeated, and again and again reiterated, that these schools may be duly appreciated—I speak of all the Normal Schools—and may be satisfactorily and properly supported. We can remember the time—and I desire to corroborate Professor Hicks in this and one or two other things he said—when those who were supposed to be fit for nothing else were thought to be good enough to become teachers, and the consequence was that the training of the young was left in the hands of some of the worst description of people. Thank God, that time has passed. The change, I believe, is due, to a great extent, to the action of the Montreal school. If it were possible—and I think it is—I would have no recognized public teacher in charge of either academies or common schools in this country, who had not passed through the training to be had in this Normal and similar schools. (Hear, hear.) I will give you one out of many reasons for this opinion. Here students may be made good teachers. People are not born teachers more than lawyers or divines. The art of teaching must be taught them. The art and skill and tact of teaching must be attained by long-continued practice. We have seen in schools teachers apparently competent and well-educated, and yet the most useless persons imaginable, and that because they knew not how to go about their work. Moreover, the professions must be seconded, and most heartily, by the students. I here desire to corroborate another thing said by Prof. Hicks—that there can be little happiness, at all events, and less success, if the love of teaching be wanting. I can well remember being much surprised by the entire failure of a school presided over by an apparently competent and well-educated teacher, and I desired to learn the reason. The secret was apparent: he had no love for the work, which he had merely taken up till something better offered. The second important point for a teacher is, dependance on the power of God—to work with prayer. If I had to choose between two teachers, one less competent than the other, the inferior one being a God-fearing man or woman, I should, without hesitation, take the latter. And why? Because I know that such a one would go through his work praying for the blessing of God, which, I am confident, would follow it; and I am satisfied that such a teacher would go through his work not as a man pleases, but with singleness of heart, fearing God. That teacher would be a faithful one, whatever the result. Concerning my own class, I must speak with the most unqualified satisfaction of the way in which it attended most of the religious instructions. After a day of hard work, consisting of school-labour and studies generally, the pupils would come often and sit down with me to the study of the Work; they would unite with me in prayer, and there seemed to be no flagging on their part. I know of no single instance of the absence of an individual of them through any trifling excuses. I am satisfied, when this is the spirit shown, that when you go forth to your own work you must have success, and that a blessing will rest upon your own souls as well as your labours, and that you will be a blessing to the country at large. There must be in good teaching discipline combined with love. You can do nothing whithout discipline; but the discipline of the rod is much to be deprecated when it is alone. I can well recollect an illustration on this head, which took my mind. A father and son were working together, when the latter preceived a crooked, gnarled tree, and asked his father if he could account for its state. The father replied, "I suppose it was trodden upon when little." Now, it occurs to me that if little ones are trodden on, they will grow up crooked men and women. I am confident that you will go to your work with the principle of love influencing your minds, and will teach the youths affectionately, from the examples you have given already, and the way you have striven to be qualified for your work. I have been connected with education for more than a quarter of a century, the greater part of the time as a superintendent, and I desire thus publicly to bear my testimony to the efficiency of the Superintendent of Education for Lower Canada. (Applause.) I know, from experience, someting of his difficulties and labours; and I am persuaded that, with a capacity, a fairness, and an endeavour to meet the claims of the country, rarely equalled, he has acted with a sincere desire to do justice to all. (Applause.) I know none who could enter on his work, who would be likely to do it better. And now, teachers, you will remember what the Hon Superintendent told you just now, to look to him for help and guidance and defence; and my advice to you is, whenever you are in difficulties—I do not mean mere trifling difficulties—go direct to the Superintendent and put his promise and profession to the test. I am confident of the result, and can only say I hope that he will long continue to fill, as he has done, well the arduous duties of his post. (Loud applause.)

Princ. Dawson said he had hoped we should have an address from the Rev. Dr. Lilley, on behalf of the Corporation; but he was, unfortunately, unable to be present. He presumed it was better to close

now with the announcement in regard to next session. We hoped to commence again on the Ist of September next, and should be glad that as many as possible of those who had taken the elementary diploma would take the advice of the Superintendent, and return to study for the model school diploma. He (Principal Dawson) would be glad to see back, also, those who had not this time taken the elementary school diploma, in order to their obtaining it next year; and that all who entered upon teaching would make enquiry in the schools and districts wherein placed, for the purpose of bringing out any suitable persons procurable, to have them sent to be trained as teachers, so as to keep up and increase the stock of trained teachers, not yet as numerous as required. He hoped they would circulate as widely as possible information regarding the school. He and the professors and teachers of this school parted with them with regret, regarding them as friends who had labored with them in the work of this school in the past session; and they carried away with them all the good wishes for their future success, of himself and their teachers. He knew they would do well as teachers, from the spirit that had characterized their work here, and from what their religious teacher "and others had stated concerning them; for he was aware that many of them were actuated by the highest principles in this matter. He would say to all. Work diligently and earnestly, with the fear of God and the highest motives before their eyes;" and he had no doubt, that should it ever be required, they would find the Superintendent fulfiling his promise to them. He was certain the Normal School and the people of the country would do all they could to give what aid might be needed. He did not know that any part of the work he was engaged in here was one in which he had nearly so much hopes of doing good, as in the little he did in connection with this Normal School. He looked to the teachers for spreading over the Province all the good they had got in this school, from the teachers here, and thus doing a greater work than any of us can do in the sphere in which we were placed; and, trusting that they might do so, and that God might bless them in it, and that they might get all the credit and sympathy and kindness they could expect therein, he bid them. "Good bye." (Applause.)

The proceedings were enlivened by the singing of several pieces by the young ladies, accompanied on the melodeon by their teacher in this branch, Prof. Fowler. The music was very good, and did high credit to both master and pupils.

The benediction having been pronounced by the Rev. Canon Leach, and the national anthem sung by the pupils, the meeting dispersed.—*Montreal Gazette.*

McGill Model School.

(From the *Montreal Gazette,* June 29.)

The annual public examination of this school took place yesterday, as also the distribution of prizes, at three in the afternoon, in the hall of the Normal School. Mr. Principal Dawson presided, Prof. Robins, of the Normal School, and Mr. McGregor, teacher of the boys' department of the Model School, occupying seats on the platform. The Hall was crowded with the scholars, and their relatives and others interested in the institution.

Principal DAWSON opened the proceedings by an address to the pupils, who comprise youths of both sexes. He said that one of the most pleasant duties he had to perform in connexion with this school was the annual distribution of prizes to its attendants—prizes fairly earned, and as fairly as possible distributed. It was doubtful whether prizes could be absolutely fairly distributed, because we could not tell which of the young people had worked best and hardest for them. There were some scholars cleverer than others, and some possessing more advantages than their fellows; while some worked harder than their schoolmates; there were a great many differences to be taken into account, some boys doing better at one time than another, so that really it was not possible to make quite sure that the prizes were always given to the right person. But one thing we were certain of—namely, that the prizes were always given fairly and honestly, according to the teacher's best judgment, and to persons thought to have done best in the circumstances. Winners of prizes should bear in mind that they had no right to triumph over others who had not taken prizes, because they might, on reflection, come to the conclusion that there were pupils in the classes who having got no prizes, deserved them as well as themselves. If we had nothing to give you but prizes, we should have nothing worth your coming here for. We give you, however, a great deal more worth your attendance than prizes—the learning and training you receive. That was the really useful thing, and those who got no prizes got that, many, perhaps, just as much as the prize-takers. He would like, if possible, to be in this school every day, to witness the work there carried on, and would like also that the parents of pupils would visit the school oftener, and take more interest in what was being done therein. He knew the Model School was effecting much good, and that the teachers were daily, in the most conscientious, faithful and able manner, carrying on the good work of this school, watching over and promoting the education of all the pupils. He thought they ought, therefore, to join him in thanking those teachers for the amount of work done for them during the past year. Others did work in connection with this school, but it was of minor importance, the grand work being that of the teachers, which had been crowned with success. He would impress upon all the scholars that the great prize they obtained here was mental training and culture. He would also ask them to unite with him in thanking God for the measure of success enjoyed in the past year—for the health and other blessings bestowed. We should pray for their continuance also. He hoped that Christ would be their guide through life, and that they would all be His children, and be guided by Him into His blessed presence at last. He hoped that all blessings would attend them through life, and that they would go forth to good and useful work, and be prosperous therein. As he had to go to another meeting, he would leave the prizes to be distributed by Prof. Robins, a very worthy person for the duty. Principal Dawson then bid the scholars good bye, hoping to see them all again at the beginning of next session, and retired warmly applauded.

The scholars now sang a hymn, accompanied by Professor Fowler on the piano, the music being effective and very creditable to all.

Miss Derrick read the subjoined list of Prizes given in the Primary Department:

5th Class.

George Sutherland—Reading and Writing.
Charles Storey—Good Conduct and Geography.
John Dixon—Arithmetic.
George Corcoran—Spelling.

4th Class.

Hannah Boyd—Geography, Writing, Spelling.
Hartley Robins—Reading, Arithmetic.
James Green—Spelling, Arithmetic.
William Cooper—Good Conduct.

3rd Class.

Annie Felkin—Geography, Writing, Arithmetic.
Annie O'Grady—Spelling.
Arthur Faulkner—Arithmetic.

2nd Class.

Luther Lee—Spelling, Arithmetic.
Peter Dougall—Geography.
Henry Jones—Writing.
Maggie Craig—Conduct.

1st Class.

David Willcocks—Spelling.
Agnes Maxwell—Reading, Arithmetic.
Fanny Gould—Good Conduct.

Promoted to Girls' Department—Elizabeth Corley, Hannah Boyd.

Promoted to Boys'Department-John Dixon, Charles Shorey, George Sutherland, George Corcoran, Frederick Thayer, Frederick Elliott, Harley Robins.

The girls were now called forward and had their prizes handed to them by Prof. Robins.

After some further excellent singing by the pupils,

Miss Coady now read the following lists, after which the prizes were presented

Advanced Class.

Agnes Cairns—Reading, spelling, writing, French, Latin, Algebra, arithmetic, grammar, composition, vocal music, and deportment.

Maggie Ritchie—Derivation, geography, English literature, vocal music, deportment, punctuality, and regularity of attendance.

Elizabeth Strickland—History, physiology, miscellaneous questions, deportment, and general standing.

Senior Division—10th Class.

Laura Sloan—Writing, French, arithmetic, geography, grammar, history, general improvement, punctuality, and regularity of attendance.

Esther A. Hillen—Composition, English literature, miscellaneous questions, and general standing.

Mary Jane Fraser.—Vocal music.

9th Class.

Louise Ibbotson—Arithmetic, geography, and history.

Isabella Hunter—Reading, drawing, English literature, punctuality, and regularity of attendance.

Mary Jane Miller—History and grammar.

8th Class.

Sarah Gladstone—Drawing, French derivation, history, punctuality, and regularity of attendance.

Elizabeth Renwick—Reading, arithmetic, grammar, composition, and miscellaneous questions.

Jennie McLaughlin—Spelling and geography.

7th Class.

Mary Jane Courtney—Drawing, arithmetic, and grammar.

Sarah Haines—Reading, composition, and English literature.

Intermediate Division—6th Class.

Ellen Cribb—Spelling, geography, grammar, natural history, Canadian history, and miscellaneous questions.

Katie Mills—Writing and composition.

5th Class.

Dora Goold—Spelling and drawing.

Junior Division—3rd Class.

Annie Quinn — Reading, spelling, geography, grammar, miscellaneous questions, deportment, punctuality, and regularity of attendance.

Sarah Mary Broome—Writing, drawing, arithmetic, punctuality, and regularity of attendance.

2nd Class.

Agnes Hunter—Reading, spelling, arithmetic, geography, grammar, history, and miscellaneous questions.

After more good music from Professer Fowler and pupils,

Mr. McGregor read the list of boys winners of prizes, as follows:—

PRIZE LIST.

BOYS' DEPARTMENT.

Junior Division.

Archd. McGowan—Spelling, writing, drawing, and arithmetic.

D. Darling—Credit marks, reading and spelling.

F. Varey—Reading, drawing, arithmetic and geography.

B. McAdam—Credit marks, spelling, writing and drawing.

D. Patterson—Reading and grammar.

Intermediate Division.

W. Seath—Arithmetic, mental arithmetic and micellaneous questions.

F. McDonough—Credit marks, reading and grammar.

J. Charters—Punctuality, spelling, writing, geography and mental arithmetic.

Sam. Stuart—Spelling, grammar and composition.

Jno. Tees—Credit marks, arithmetic and mental arithmetic.

J. McAdam—Credit marks, writing, arithmetic and grammar.

Senior Division.

Jas. Mathieson—Credit marks, miscellaneous questions, arithmetic, book-keeping and music.

A. D. Fraser—Spelling, French and Latin.

Captain M. Kerr—Latin, geography, history and natural philosophy.

Thos. Cameron—Reading and grammar.

R. M. Horne—Music.

J. McBride—Credit marks, spelling, micellaneous questions, etymology, natural philosophy and book-keeping.

C. Auld—Writing, geography and grammar.

A. Jones—Writing.

G. Bulling—Spelling, etymology, composition and French.

R. Green—Spelling, grammar and French.

W. Kerr—Credit marks, reading and composition.

Advanced Class.

E. Kershaw, 1st prize, for general proficiency and geometry.

J. Forman, 2nd prize, geography.

Prof. Robins now made the announcement for the examination of the Pupils of the Normal School to-morrow.

Prof. FOWLER and pupils again treated the audience to some capital music.

The proceedings closed with the singing of the national anthem in fine style.

The Model School Drill Association now proceeded to the yard in rear of the building, where they were put through drill by Sergt. Nolan, 63rd Regiment, their infantry drill instructor. The lads wore neat, serviceable-looking uniforms of dark grey, and went through the various company and battalion movements, as also the manual exercise, in a highly creditable manner.

Convocation of Bishops' College.

The Convocation assembled in the large Hall of the College at 2 o'clock, and was very ably presided over by Hon. E. Hale, acting as Vice-Chancellor. The hon. degree of D. C. L. was conferred on C. Dunkin, Esq., M. P. P., one of the Governors of McGill College. F. W. Torrance, Esq., M. A., of Edinburgh, B. C. L. of McGill College, was andmitted *ad eundem*, and the Rev. A. C. Scarth, Incumbent of Lennoxville, to an hon. M. A. degree. Ordinary Degrees in the usual course were also conferred on the following members of the College:

Master of Arts.—Rev. T. W. Mussen, B. A., Incumbent of West Farnham.

Bachelor of Arts.—Job Babin, (Prince of Wales' Medalist, 1864); C. Rawson, (do, 1865): Lewis E. Fuller.

An able address on the importance of collegiate education in connexion with the common schools of the Province was then delivered by Mr. Dunkin; a paper on "Arts" read by the Rev. Professor Dodwell, and a valedictory by Mr. C. Rawson. At the commencement of the Session, Mr. Hale had made some very feeling remarks, lamenting the absence of the Chancellor (Mr. Justice McCord), who had been for time suffering from a painful attack of illness; but at this stage of the proceedings, the Bishop of Montreal announced that he had received a telegram from Montreal containing the most unexpected intelligence of the death of the Chancellor, who had expired early that morning. His Lordship, with much feeling, expressed what he was sure must be the sense of all present, when he testified to the very valuable services of their Chancellor in connection both with the College and University, and deeply his loss would be felt. This distressing news cast a gloom over the remainder of the day; the proceedings of the Convocation were brought to a close, and all the usual arrangements for the social gathering at the colleges in the evening were postponed to some future day.—*Montreal Gazette.*

Notices of Books and Recent Publications.

SMITH.—A Smaller History of Rome, from the Earliest Times to the Establishment of the Empire; By Wm. Smith, LL. D., with a Continuation to A. D. 476, by Eugene Lawrence, A. M.—Harper, New-York, 1865.—351 pp., 12mo.

This is a neatly illustrated work, intented for the use of schools. Its arrangement is methodical and perspicuous.

TAYLOR.—Portraits of British Americans, by W. Notman; with Biographical Sketches. Edited by Fennings Taylor, Esquire.—Lovell, Montreal, 1865.—Part 1, 49 pp., 8vo.

The photographs contained in this number are those of His Excellency Lord Monck, the Most Rev. Francis Fulford, D. D., Lord Bishop of Montreal and Metropolitan, Hon. J. A. McDonald, Hon. S. L. Tilley, who was Premier of New Brunswick when the Convention assembled at Quebec, and Sir Louis Hypolite Lafontaine, late Chief Justice of Lower Canada.

The portraits are in Mr. Notman's usual excellent style, and the letter-press by Mr. Lovell is not inferior as to material and workmanship, while the literary part of the work reflects great credit on Mr. Taylor, whose style is at once facile and elegant.

We find in the biography of Lord Monck the following remarkable coincidence of historical dates:

"The 10th February is doubtless a marked day in the history of England, and it is especially so in the history of Canada; for, on the 10th of February, 1763, the Provinces were ceded by France to England. On the 10th of February, 1838, the bill for suspending the Constitution of Lower Canada received the Royal sanction; and on the 10th February 1841, the proclamation was made which created the Province of Canada.

"It was not, we may well imagine, to commemorate a British victory or a Canadian misfortune, that the 10th of February was selected for re-uniting the separated Provinces. No doubt the day was chosen by authority, and the reason for the choice, it may be easily conjectured, was to associate the political fortunes of the Canada, with the personal history of our Most Gracious Queen.

"The Provincial espousals took place on the first anniversary of Her Majesty's marriage with the great and good Prince Consort; but the political union had not attained its turbulent majority, when the personal one was dissolved by death. The touch of time at which the type crumbled seemed also to leave the mark of dissolution on the antitype. The grave which had been prepared to enclose the former only prefigured another grave which seemed to be opening rapidly to receive the latter.

"Such facts should recall gloomy memories, while they suggest the

commentary that the fortunes of Canada, as exemplified in her rulers, have been wreathed more with cypress than with bays.

" The Earl of Durham, who advocated a British American Confederation and accepted a Canadian Union, died five days after the Act was passed which embodied his counsels.

" Lord Sydenham, who in person opened the first session of the United Parliament, was not, in person, permitted to close that session, for almost the last act of his ebbing life was to delegate to another the duty with which, by the gracious permission of his Sovereign, he had intended to determine his Canadian career. The sunset of that evening was the last this gifted statesman was permitted to see. By the light of the following day the heralds might have received back again the unfolded, unworn ribbon of the Bath, and have noted in their college records that it was restored to royalty by the representative of " The first and last Baron Sydenham." His successor, the courtly and gifted Sir Charles Bagot, the very beau-ideal of manly grace and beauty, had scarcely entered on his government when he was stricken with mortal disease, and within fifteen months after his arrival in Canada, expired in the house in which his predecessor had died.

"Sir Charles Bagot was succeeded by the benevolent and large hearted Lord Metcalfe, whose career would have been eloquent in instruction, had it left no other lesson than the example of unswerving fortitude, triumphing over mortal suffering of the highest duty cheerfully performed in the presence of excruciating agony, most patiently endured. His work done, this great and good man returned to England to die, and with his death expired his newly created title; for on his tomb the words are written: " The first and last Lord Metcalfe."

" Earl Carthcart was already an aged man when he became Governor General, and it is therefore no matter for surprise that his martial name should be found on the roll of those who have passed away.

" The accomplished and versatile Earl of Elgin replaced his military predecessor, and it was reasonable to suppose that such vigorous manhood as his seemed to be would have won the crown of age. The supposition is rebuked by his quiet grave amidst Asiatic hills, where, in a heathen land, solitary and alone, the wearied Statesman, the humble Christian, sleeps in peace.

" On the roll call of our Governors who for twenty years have represented the Crown in Canada, one alone survives. We cannot mention his name without at the same time thinking of the inextinguishable sorrow with which he who bears it must evermore recur to his residence in this Province. The troubled waters of the St. Maurice, and the quiet grave at Sillery, recall as in a vision, not only the generous, open-hearted boy who perished in one and sleeps in the other; but they tell also of the direct line of a good old family cut off—a good name passing away, or, if preserved at all, preserved only on a tombstone. If it be true that our late Governor General, the high-minded and gifted Sir Edmund Head, obtained the Queen's permission to decline a coronet—then those waters and that grave tell us also of a stainless career arrested; a glorious goal reached, and then avoided; the prize of honor won and yet declined, the aim of a life realized and yet lost. Death and sorrow, we may conjecture, had closed the avenue of ambition; and thus it may have been that one nearly peerless, among rulers, could not be attracted to the assembly of Peers. The official records of Royalty, on the page of distinctions conferred for services in Canada, will not, at all events, for the third time, in one generation, be blotted with a new entry on the roll of the extinct Peerages of England. In one form or other, directly or indirectly, it may be said that death has, with remarkable assiduity, overtaken all who have held the commission of Governor General of Canada. The great British Province of the West, like Her Majesty's possessions in the East, seems to have been a kind of fatal vestibule, through which successive rulers have hastened hurriedly to the grave.

" If the personal history of his predecessors in the government of Canada was not of a tranquilizing order, neither was the general state of the Province at the time of Lord Moncks' succession very well calculated to dispel anxiety. Political parties had been, and continued to be, greatly excited. Government, it is true, was carried on, and in the Legislative Assembly, by means of respectable majorities; but it was difficult to get rid of the impression which was keenly felt by many, and strongly expressed by some, that the persistent administration of public affairs by means of a single sectional majority, was not to be desired, even though he could not be avoided.

" In addition, moreover, to these local embarrassments, which the healing influence of time or the salutary presence of temper would assuredly have overcome, there arose unexpectedly a foreign question, in comparison with which all local difficulties seemed to fade into nothingness. The affair of " The Trent " suddenly brought the Government of Great Britain and the United States into attitudes of imminent hostility."

The biography of Sir Louis Lafontaine is but a rapid sketch, as are indeed all others which serve to illustrate Mr. Notman's Portraits. We make the following extract:

" Sir Louis Lafontaine was twice married: Firstly, to Adèle, daughter of A. Berthelot, Esq., of Quebec, by whom, however, he had no issue; secondly, to Jane, daughter of Charles Morrison, Esq., of Berthier, by whom he had issue, two sons, the present Baronet, and a second, who was born several weeks after the decease of his father.

" How tenderly that young child whom he had seen was loved, it were idle to enquire; equally idle were it to attempt to gauge the human longings that grew in the heart and mind of that proud father. We may, it is true, conjecture in what kind tones of gentleness that grave man laid his learning aside, and humbled his speech to the capacity of his child; with what ungrudging patience he watched for the dawn, and waited for the growth of thought, and broken words. We can imagine, too, that this discipline of gentleness multiplied in his own daily life brighter hopes of a more beloved existence. The increasing rays of knowledge in the opening mind of his son, from the simple purity of their light, communicated to his own intellect the twofold sensation of joy and calm—the joy and calm that belong alike to time and to eternity.

" We cannot analyze the mystery of such love, any more than we can exaggerate its intensity. We recognise a divine principle seeking mortal expression in the heart of one who was putting off mortality. It was a touching picture, who may tell its hidden meaning? The world receding—all things hurrying towards the absorbing past—the unknown assuming the shape of knowledge—the future becoming present — the invisible drawing near. At such moment, earthly longings become eloquent, the human heart seeks enquiringly for its human heir, and the dying father is consoled by the caresses of his child! In the words of Southey, we may express for the deceased Baronet what was probably his last wordly which, a wish though born of earth, was already brightened with the hues of heaven:

" To leave behind a name, I trust,
That shall not perish in the dust! '

Faillon.—*Histoire de la Colonie française en Canada. Tome 1er, Ville-Marie, Bibliothèque paroissiale.*—Poupart-Davyl, Printer; Paris, rue du Bac, 1865.—551 pp., 4to. Price, 10 frs.

The first volume of this long expected work has at length appeared. It is embellished with a fine portrait of Jacques-Cartier, and is printed with a perfection that reflects the greatest credit on the publishers. It contains a preface, an introduction, the three first parts (from 1534 to 1645), and notes having special reference to the numerous controverted points raised by the publication at Quebec of Mr. Faribault's *Voyages de Jacques Cartier*, under the auspices of the Literary and Historical Society of that city in 1843. Mr. Faillon agrees with Messrs. Faribault, Berthelot and Garneau, as to the place where Cartier passed the winter, and reconciles, in an able analysis, the different Algonquin and Iroquois traditions, explaining the texts of the old authors in such a manner as to establish the apparent fact that the aborigines found at Hochelaga and Stadaconé by Cartier were either Iroquois or Hurons, probably the latter.

The work will be completed in five volumes, bringing the history down to the conquest.

De Tocqueville.—*Œuvres complètes de Alexis de Tocqueville. Tome 8: Mélanges, Notes, Pensées, Fragments inédits.*—8vo., 496 pp.—Lévy, Paris; 1865. 6 frs.

The notes taken by M. de Tocqueville during his short visit to Canada with M. de Beaumont, are here reproduced. They contain an interesting account of a conversation between the author and the late Hon. John Neilson, on the social and political condition of the country, and the morals and character of its inhabitants. Little more than thirty years have elapsed since that time, and yet what a change has taken place!

L'Économiste Français.—The number issued on the 20th May contains a letter by a Canadian correspondent. The rate of subscription is 20 frs. Mr. Gravel of Montreal, and Mr. T. E. Roy of Quebec, receive subscriptions.

Le Foyer Canadien.—In the numbers just received (from May to November) will be found an interesting account of Mgr. Plessis' missions to the District of Gaspé and the Lower Provinces in 1811 and 1812.

La Revue Canadienne.—The numbers for March, April and May contain the conclusion of Mr. Royal's essays on the Confederation of the British North American Provinces, poetry by Messrs. Senécal and Blain, monthly and art reviews by Mr. Bourassa, notes on the Mexican question by Mr. de Bellefeuille, a biographical notice on Cardinal Wiseman by Mr. Ouellette, together with notices of books by Messrs. de Bellefeuille, Nantel, Tessier and Royal, and a criticism headed *Les Ecrivains Canadiens*, by Mr. Hector Fabre.

MONTHLY SUMMARY.

EDUCATIONAL INTELLIGENCE.

— As an appeal has been made to the citizens of Montreal in behalf of the new Irish University, some information respecting the growth and present condition of that institution may prove interesting to our readers. In 1863–4, 210 students attended the course of University lectures. Exclusive of these, 360 were matriculated in the affiliated schools and colleges throughout the provinces, making altogether 570 on the books of the University. The matriculated students are circumstanced exactly as the greater majority of those of Trinity College, who, it is well known, do not attend the lectures of the great Protestant institution, but merely go up for examination. This privilege is enjoyed to the fullest extent by the matriculants of the new University. The course pursued is this: Every year an examiner is sent to the affiliated schools, where the pupils are subjected to a most searching examination, and the cleverest of the young men are selected to compete, in due time, for the highest University honors, along with the students of Oxford, Cambridge, and Trinity College. Under this system the new University must become the great centre of the talent and learning of Catholic Ireland. The students of the Catholic University enjoy privileges even superior to those afforded the students of Trinity, as they are placed in colleges and schools under the immediate supervision of the local authorities, and are instructed by professors of acknowledged ability and experience in the important work of education. Of these colleges and schools as many as twenty-eight are already in existence, and are visited regularly by the University examiners. Such a system of training cannot fail to promote emulation and intellectual progress, and operate beneficially on the future of Catholic Ireland. During the sessions of 1863-4, 59 students attended the evening classes of the first term, 55 in the second, and 44 in the third; 98 were in the school of Medicine, and 70 in the two faculties of Philosophy and Science. This number of students, with the 586 matriculants on the books of the University, is highly satisfactory and encouraging, and augurs well for the future of the institution. At the beginning of the present century there was not, we believe, a Catholic College in the country, excepting those of Carlow and Maynooth, purely ecclesiastical institutions, which were then only in their infancy. According to the last census, in 1861 there were 98 public and 203 private classical schools. These were attended by 10,346 pupils, of whom 5,118 were Roman Catholic; and over and above this number, 1,242 Catholics were receiving collegiate instruction in May of the same year — making a total of 6,330 youths pursuing the higher studies at that period. Excepting Maynooth and the Queen's Colleges, all these seats of learning were established by the bishops, priests, and people of Ireland, and the fact evidences a love of learning amongst the Irish not unworthy of their country's palmiest days. The following important facts are supplied by the census commissioners in their report of 1861:— In 1834, there were 96 high schools, attended by 4,240 pupils, exclusively Protestant, while in 1862, there were only 60 of these schools, with an attendance of 2,075 — a falling off in twenty-seven years of 36 Protestant schools and 2,165 scholars; whereas, during the same period the Roman Catholic schools increased from 23 to 86, the 63 new schools being attended by 3,478 pupils. Upon this great change the commissioners remark: "The large increase in the Roman Catholic schools is due to the fact that whereas superior instruction had already, in 1834, been provided for members of the Established Church in chartered, endowed institutions, much more nearly in proportion to their requirements than it has yet been provided by voluntary efforts for other sections of the population, the higher order of schools had nearly all to be erected by the Catholics *from their own resources.*" Thus, in the short period of thirty years, the Roman Catholics of Ireland founded 63 new schools, with an attendance of 3,478 scholars.—*Montreal Transcript.*

— During the past year the colleges and seminaries of the United States have received liberal contributions. Yale College has received $450,000; Amherst, $110,000; Princeton (New Jersey), $130,000; the Syrian College, $103,000; Trinity (Hartford), $100,000; Rutgers (New Jersey), $100,000; Chicago Theological Seminary, $80,000; Bowdoin (Maine), $72,000; New York University, $60,000; Wesleyan University (St. Louis), $50,000; Andover Theological Seminary, $50,000; Dartmouth, $47,000; Harvard, $44,000; Williams, $25,000; Middlebury, $10,000. These figures show that the cruel war with its train of evils does not prevent the exercise of benevolence.—*Godey's Lady's Book.*

— Not long ago Hon. Abbot Lawrence, of Boston, gave to Harvard College, in aid of scientific education, the sum of $100,000 besides the services of a professor, altogether considered equivalent to an endowment of about $150,000. The *Boston Advertiser* adds:— At this juncture, Mr. James Lawrence comes nobly forward, and at once serves the cause of education, and maintains the honor of his father's name by the gift on the first of Jan., 1865, of fifty-two thousand five hundred dollars — twenty-five hundred to be expended at once in the equipment of the laboratory, and the balance to endow equally the chemical and the engineering departments.

— The grant which Mr. Matthew Vassar made to found the Vassar Female College, at Poughkeepsie, N. Y., was $408,000. The building, which is of brick, with stone trimmings, is three stories high, with a mansard roof; five hundred feet in front, including wings, one hundred and sixty-five feet deep, accommodating two hundred and fifty pupils, besides chapel, library, art gallery, recitation rooms, &c. The Presidents' and professors' houses, and teachers' rooms, will cost $200,000, and will be completed before August. A library of 2,500 volumes is secured already, and a cabinet of minerals worth $8,000. A great equatorial telescope, aperture 12¼ inches, length 17 feet, will be mounted and adjusted in August. The College will open September 1st.

— At a meeting of Teachers and Local Superintendents held in Ottawa on the 19th of January last, of which due notice was given through the newspapers, after mature deliberation, it was resolved to organize an educational institute for Central Canada, having for its objects: 1st, the discussion of practical questions connected with education; 2nd, the reading of papers and delivery of lectures on educational subjects; and 3rd, taking such measures as may from time to time be considered necessary to promote the interests of the teaching profession. It has long been felt that an association of this kind has been greatly needed in this section of the Province; and, looking at the good accomplished by similar associations in other parts of Canada, it is confidently anticipated that the one recently organized for Central Canada will, if properly sustained, prove highly beneficial, not only to teachers, but also to the public generally. The distance between the Central and the extreme Eastern and Western Counties of this Province has to a large extent prevented teachers from this section from availing themselves of the advantages of other kindred institutions; and it is thought that a sufficiently extensive field may be found in Central Canada in which to commence another. It is contemplated to have two meetings of the Institute during the year, one on the first Friday of July, the other on the last Friday of December, also to hold the meetings in different places, as may be arranged by the members of the Institute. Many of the leading teachers and other friends of education have already expressed their hearty concurrence with the movement, and their intention of connecting themselves with it, as soon as it commences its operations. The first meeting of the Institute will be held in Ottawa, on the first Friday of July next. Parties are respectfully invited to attend and become members, and in the meantime to communicate their intention of doing so to J. McMillan, Secretary.—*Journal of Education, U. C.*

— We notice in the *Scotsman* the name of Mr. D. James Macdonnell, of Canada, among those of seven gentlemen, who, out of twenty candidates, have, after a strict examination, taken the degree of Bachelor of Divinity in the University of Edinburgh. Mr. Macdonnell is a graduate of Queen's University, and has well sustained the honor of his *Alma Mater,* having also carried off the first and second prizes in two of the Edinburgh theological classes respectively, besides distinguishing himself in a similar manner last year at Glasgow University.—*Ib.*

— The *Montreal Gazette* of Saturday has the following:—"We noticed some time ago that Mr. G. D. Redpath, of Montreal, had carried off the highest prize for sculling on the river at the University of Cambridge. But it seems that he trained not only his muscle but his brain also; for we notice that in the last examinations he went out with honors in the classical tripos. Although Cambridge has its chief *renommée* with the outside world for mathematical students, we believe it is an error to suppose that honors in the classical tripos are not as hardly earned there as at Oxford, or as the honors in mathematics at Cambridge itself. A disadvantage of our Canadian or of American students competing for classical honors in either of the great English Universities, is the lack of thorough training in all or nearly all of our schools in Latin versification, which counts for a great deal at both Universities. Spite of this, Mr. Redpath went in for honors and won them. To show how boating and study go together, we see it noticed that the man who took the highest double honors at Cambridge this year — being 18th wrangler and high up in the classical tripos as well — rowed No. 2 in the University boat at the recent contest between Oxford and Cambridge. It is the old maxim proved — *Mens sana in corpore sano.*

— We are pleased to see by the Glasgow *Herald* of the 29th ult., that our young townsman, Mr. Archibald E. Malloch of this town, has been adding laurels to his name. The prize and honor certificates of the University of Glasgow for 1864-5 are published in full in the *Herald*, wherein we find that Mr. Malloch has been awarded a first class certificate in both classes in the senior division of Anatomy; also a first class certificate of merit in Surgery. He also ranks B.A. This must be very gratifying to Judge Malloch, as it gives evidence that his son must have attended well to his studies. In the same paper we see it stated that the Degree of Doctor of Divinity has been conferred by the same University on the Rev. William Snodgrass, Principal of Queen's College, Kingston, Canada.—*Brockville Recorder.*

— A select auditory, says the *Quebec Journal,* attended the annual literary *soirée* at the Laval University. Essays on divers subjects, and music, were the chief features in the programme of the evening, which passed off very successfully.

— While Canadians are obtaining honors in the English Universities, others meet with equal success among our neighbors. We find in the report of the examinations of St. John's College, Fordham, the mention of the name of Mr. Zéphirin Renaud who has received the honour of Bachelor of Arts. In the list of prizes, Mr. Alfred L. Renaud has received in *Belles-Lettres* a prize for his verses in Latin and Greek. These two scholars are the sons of the Hon. L. Renaud, of Montreal.

— The Hon. J. A. MacDonald, Attorney General for Upper Canada, has received the degree of LL. D. from the University of Oxford.

LITERARY INTELLIGENCE

— Paris is at present in possession of thirteen different museums, not counting those at the Louvre and at Versailles. Besides the ancient and modern works of sculpture, these rich collections contain the most miscellaneous objects of mediæval art, as well as of Renaissance paintings, drawings, woodcuts, and engravings, Egyptian, American, Celtic, and Roman antiquities. The collection of the Ja.din des Plantes, with its cabinet of comparative anatomy, founded by Cuvier, is not included in the above mentioned number. All these collections are opened to the student, as well as the six large public libraries, of which the Imperial contains one million volumes of eighty thousand manuscripts; besides these, there exists a number of valuable libraries of the different faculties, for the special branches of study, and of scientific institutions, most of which are opened to the student; and those few for which a special permission is necessary, grant it without any difficulties. No wonder that Humboldt wrote to a friend in 1827, who had expressed his surprise at the German scholar having made the French capital his abode, " You are surprised at this? I am certain to find here, in one place, what I should have to look for in Germany in thirty-six places, and then very likely in vain."—*Littell's Living Age.*

— We extract the following on the *Library of the British Museum* from the *Illinois Teacher:*

Years ago Washington Irving sketched, in his delightful way, the old reading-room, and pictured the faces and the occupations of the men who were buried in their researches and their book-making. But now the scene is all changed, and that new reading-room, which is far more worth seeing than the House of Lords at Westminster, has been reared and is open to the use of a grateful public. Full accounts of this most beautiful and convenient room have been given in our American journals, but not to the extent precluding my own. It is circular, and forms a dome, the span of which is much larger than that of St. Paul's, and even that of the Pantheon at Rome. St. Peter's alone surpasses it. How high it is I can not say; judging by my eye as I sit here, it is thirty-five feet from the floor to the point where the walls begin to arch toward the summit of the dome. From the floor to that summit can not fall short of a hundred feet. The light is all admitted from the roof.

Now let me try to picture the arrangement of the tables. At the centre of the circle which forms the floor is a hub, so to speak, about twenty feet across, surrounded by a ledge, where the assistant librarians sit and receive the applications for books. Outside of this there are two concentric tables, under which are deposited the great catalogue. These tables are broken at three or four places, so as to allow free passage from the central dais to the main body of the hall. Outside of the exterior of these two ring-like tables the tables for readers begin, and shoot away to the circumference of the room like the spokes of a wheel. At this circumference is the library of reference, containing all such books as maps, dictionaries, and the like, 200,000 in number. The tables for readers are adapted each to sixteen persons, about five feet being reserved to each. You can not see your vis-à-vis, as the table is parted in the middle by a partition, not of a single plank, but hollow and about six inches through. This rises about a yard above the table, and through it the hot air from the furnace is thrown into the room. No other arrangement could possibly have shielded each so well, and so well and so uniformly have warmed all. There are seventeen of these tables, and under each there is a pipe for hot air for the feet. Fastened into this partition and at convenient hight is a rack for pens and ink; at the left and at the right of the rack are the most convenient bookholders I have ever seen, which, by an exceedingly effective contrivance, bring whatever large works you may be consulting exactly at the distance and the range which suit you best. In one word, the arrangement is perfect. I do not see a single detail which could be remedied. Your chair is roomy, leather stuffed, and most comfortable. The table is leather-covered and exactly adapted for writing. Paper-cutters and blotters, all the adjuncts of the study, are provided for all. The floor is covered with a preparation resembling leather, and footsteps fall noiselessly upon it. It is a luxury to study here, independent of the vast stores of material in the great library, close by, of half a million volumes.

One word as to the catalogue. It is in manuscript, and is kept, as I said, under the ring-like tables which surround the librarian's dais. I hardly dare tell you how large it is. Each volume is of the size of a merchant's ledger: and how many of these huge folios do you think there are? There are eleven hundred and fifty-five! There are a hundred and sixteen devoted to the letter H alone. Under such words as ' Bible ' and ' Shakspeare ' there are several thousands of entries. And yet it is so thoroughly systematized that, if you know the full name of an author, you find no difficulty in proceeding. In applying for a book you have to write the number of the shelf where it is to be found, the title, size, place and date of publication. A half an hour's waiting puts the book before you.

Thus much for the reading-room of the British Museum. There are seats for upwards of three hundred students, and they are generally well occupied. One would think there would be more, but I believe the accommodations are equal to the demand. Busy men come and go, and pay no regard to each other and to each other's work. At this moment there are students both on my right and left, each hard at work over theire large volumes, but I know not what. I only know that I myself am looking up the whole literature of Syrian and Arabian travel, and my own task alone is what engages me. But let no reader of mine ever come to London and neglect to look in at this British-Museum reading-room. The museum itself, with its magnificent collections in all departments of science and art, he will of course not pass by; but next in interest to the collections of ancient statuary and the authograph letters of England's greatest men, collected under this roof, the most interesting sight of all is the noble reading-room.

— M. Sainte-Beuve, a member of the French Academy, has been made a Senator. This appointment is supposed to have some connection with the recent admission of a political writer, M. Prevost-Paradol, to the Academy, in the room of M. Ampère. If the Academy is to draw its recruits from politics, it is only just that the Senate should render the same homage to literature.

NECROLOGICAL INTELLIGENCE.

—*Willmer and Smith's European Times* (Liverpool) of the 29th ultimo has the following in its second edition:—We announce with extreme regret the death of Sir Samuel Cunard, whose name in connection with the British and North American Royal Mail Steamship Company, established between Liverpool and America, has a world-wide reputation. He expired yesterday evening at his residence, Bush-Hill House, Edmonton, Middlesex, in his seventy-eighth year. The hon. baronet was born in 1787, and married in 1815 the daughter of a gentleman named Duffus, of Halifax, Nova Scotia. His eldest son, Edward, born in 1816, succeeds to the baronetcy, and, though his permanent residence is in New York, he was present when his father breathed his last. The British government, to mark their appreciation of the great services which Sir Samuel Cunard had rendered to the commerce of the world, and more immediately to that of England and America, conferred on him, in 1859, the dignity of a baronet — a dignity won by his triumphs in a field of enterprise in which the company he assisted to establish has distanced all competitors, and proved itself at once the most successful, and the best friend of civilization and progress, in the whole history of navigating the ocean by steam power. What Watts and Arkwright were to the spinning jenny, Sir Samuel Cunard was to the marine engine.

— We announced yesterday the death of the Honorable J. S. McCord, one of the Justices of the Superior Court for Lower Canada. He was born near Dublin on the 18th day of June, 1801. His father, who had friends in Canada, came here in 1806 on business connected with a dispute about property in Griffintown, and settled in this country. He was elected and sat for Bedford County (now Missisquoi) in the Parliament of Lower Canada in 1817. Judge McCord was sent to school to the Rev. Dr. Wilkie, at Quebec. He afterwards was for some time a student at the Seminary of St. Sulpice in this city, where he gained a perfect mastery of French. He studied law in the offices, first, of the late Chief Justice Rolland, and subsequently in that of the late Mr. Justice Gale, and was called to the bar in 1822 or '23. He continued to practise his profession until the outbreak of the rebellion in 1837, when he entered the volunteer service. On the reorganization of the courts by the Special Council, he became a District Judge and Judge of the Court of Requests, and subsequently Judge of the Circuit Court. Later, on the reorganization of the Judiciary in 1857, he became a Judge of the Superior Court. He has thus been on the Bench for 23 or 24 years, and in that time has done judicial duty in every portion of the old District of Montreal, embracing about half the population of Lower Canada. Although not standing foremost among the jurists who have won celebrity among the members of our Bench and Bar, he has yet proved an eminently useful and painstaking judge. He was successively Vice-Chancellor and Chancellor of the University of Bishop's College, Lennoxville, which office he held at the time of his death. He was the active promoter of the establishment there of the Grammar School, now such an eminently successful feature of the institution. In the Church Society he took a most active part, with the late Mr. Moffatt, and others in the work, more especially of the Central Board and Lay Committee, of which he was for several years chairman. He was also one who laboured most zealously in putting the fund for widows and orphans of deceased clergymen on a satisfactory basis, and to promote the formation of a sustentation fund for the partial endowment of

the clergy of the diocese. He performed a great deal of patient drudgery in making up a schedule or cadastre of the properties belonging to the several parishes and missions in the diocese, in order to show where and what most was needed to be done, and investigated the titles, and set those which were imperfect right. On the very day of his death the Convocation of Bishop's College sat to confer degrees, &c. But not alone in the public places he was wont to labor in will he be missed. Gifted with refined tastes, fond of pictures, statuary and books, as well as flowers, of a most happy and genial disposition, affable and courteous in his manners, he made himself beloved in private and social life, and leaves behind him almost numberless friends in different parts of the country, who will read of his departure hence with heartfelt and unqualified regret. He was married in 1832 to Miss Ross (daughter of the late David Ross, Q. C.), who survives him, and by whom he leaves a family of three sons and two daughters. (Condensed from *Montreal Gazette.*)

— The late Mr. Benjamin Holmes, whose sudden death the press has so recently been called upon to deplore, was born in Dublin on the 23rd April 1794, and came to Canada when only nine years of age. His first essay in life was made as clerk in the commercial house of Henderson & Armour. During the war of 1812 he served as ensign in the *Canadian Fencibles*, and in 1837-38 was foremost among the volunteers engaged in suppressing the insurrection. He was, in 1841, elected to Parliament for the city of Montreal with the Hon. Mr. Moffatt, and re-elected in 1848, conjointly with the late Chief Justice Lafontaine. Having modified his political opinions with advancing years, he saw fit to cast his vote in favor of the *Rebellion Losses* Bill under the Lafontaine-Baldwin Ministry, and subsequently acted with the more advanced reform party. It was from the McDonald-Dorion Cabinet that, in 1863, he received the appointment to the collectorship of Montreal, a place he held at the time of his death. Mr. Holmes was an active politician, a warm partizan, and a man of considerable intellectual powers

— Private letters by the *Belgian* apprize us of the demise, on the 14th May, in Paris, of a gentleman who, for half a century, occupied a high position in our social and commercial community. Henry Atkinson was born in England, June, 1793. Having settled permanently in Quebec in 1812, at the age of nineteen, his successful operations in timber, his intelligence and unceasing industry soon permitted him to take a leading part in our export business. For many years he was connected, in business, with his elder brother, William Atkinson, Esq., formerly of Cap Rouge Cottage, near Quebec, and still living in London. Some large profits on very extensive contracts with the Imperial Government, in connection with the navy, induced him to retire, about thirty years ago, from the exportation of timber, with a princely fortune, amassed in very few years. He then became a most extensive purchaser of real estate, owning at this moment some of the most valuable stores and wharves in the Lower Town. About 1830, Mr. Atkinson, who was distinguished by a strong taste for travelling, literature and fine arts, sailed for Europe and devoted four years of his life to travelling through France, Germany and Italy, locating himself for a whole year at Venice, and visiting the most fashionable watering-places. He then returned to Canada, and immediately purchased the most picturesque seat on the shores of the St. Lawrence, Spencer Wood, from the Heirs Percival, where he resided in magnificent style for nearly twenty years, his large rent-roll permitting him to indulge without stint in his fancy for embellishing his grounds and introducing the newest and choicest European adornments of which the park-like scenery of the place was susceptible; his ranges of glass-houses covered acres; his exquisite entertainments, and store of rare books, *objets de vertu*, his picture gallery, representing several thousands of pounds, purchased in Rome and elsewhere, for many years made a visit to his country-seat one of the chief attractions of strangers visiting Quebec. In 1854, the man whose whole existence had seemed to centre in literature, rural beauty, flowers, and the society of friends, suddenly decided to sell Spencer Wood to the Government, as a residence for the Earl of Elgin, returned to business with more zeal than ever, and invested large sums in the purchase of the St. Henry saw, grist and carding-mills, oil factories, timber limits. A few years afterwards he became the purchaser and still holds the very extensive mills at Etchemin, formerly Sir Henry Caldwell's. The deceased's power of application was, we may say, something extraordinary; no amount of head-work, writing or business could weary him; and until within a few months of his death, he would spend a toilsome day in his counting-house, in St. Peter street, take his papers home, write until midnight, then three hours of sleep, and write again until breakfast-time, summer and winter; such was his every-day life. Gifted with a mind of great vigor, a sagacity scarcely ever at fault, a most retentive memory, he possessed a rich store of knowledge on all points—was well acquainted with English, French and Italian literature; in one word Henry Atkinson was a polished, educated gentleman of the old school. With all that, he was of so retiring, so shy a nature, that he shrank from anything having even the semblance of display. This peculiarity became a fault in him, as it instantly closed to him the door to high offices for which his talents, business habits and wealth eminently fitted him. Mr. Atkinson had spent last winter at Nice, in company with some valued old Quebec friends, Mr. John Fraser and Mr. Peter Burnet, who left this city to reside at Nice some thirty odd years ago. Mr. Fraser was with him in Paris at his last moments. Henry Atkinson was close, at the time he died, on to 73 years. Our commercial community, a very few months back, had to mourn over the loss of one of its brightest luminaries, the late G. B. Symes, Esq. Another Quebec merchant, as eminent by his position, now follows.—*Morning Chronicle.*

MISCELLANEOUS INTELLIGENCE.

— The wind is a musician by birth. We extend a silken thread in the crevices of a window, and the wind finds it and sings over it, and goes up and down the scale upon it, and poor Paganini must go somewhere else for honor, for lo! the wind is performing upon a single string. It tries almost anything on earth to see if there is music in it: it persuades a tone out of the great bell in the tower, when the sexton is at home and asleep; it makes a mournful harp of the giant pines, and it does not disdain to try what sort of a whistle can be made out of the humblest chimney in the world. How it will play upon a tree until every leaf thrills with the note in it, and the wind up the river that runs at its base in a sort of murmuring accompaniment! and what a melody it sings when it gives a concert with a full choir of the waves of the sea, and performs an anthem between the two worlds, that goes up, perhaps, to the stars, which love music the most and sung it the first. Then, how fondly it haunts old houses; mourning under eaves; singing in the halls, opening the old doors without fingers, and singing a measure of some sad old song around the fireless and deserted hearths.—*California Teacher.*

— The Dublin *Evening Mail* says: The circumstances under which Canada is represented at our great Exhibition are such as to deserve from all interested in its success special mention and consideration. The Parliament of that great province, before adjourning in March last, was occupied daily and nightly in considering the momentous questions of colonial union and the colonial defences. The former project was adopted by a vote of three to one, and in relation to the latter a prorogation was asked and obtained till the summer, to enable a delegation of the Canadian Cabinet to proceed to London, in order to come to some definite arrangement at once with Her Majesty's Imperial Government. A vote of credit was then voted, the sole and only item specified being the sum granted for the Dublin International Exhibition. This grant was placed at the disposal of the Hon. Mr. McGee, Minister of Agriculture, with whom were subsequently associated, by order in council, the Rev. William Agar Adamsom, LL.D., and Thomas Devine, Esq., F.R.G.S.— all three being natives of Ireland. The portion of the Exhibition building occupied by Canada, and indicated by the very handsome flag of that Province, forms the northwest gallery angle immediately fronting the grand staircase. One of the principal — if not the principal — feature of the collection is the very full display of economic and other minerals. We have here iron ores from Lakes Huron and Superior and from Marmora, in Central Canada, and from Three Rivers in the neighbourhood of Quebec; copper, both native and in the ore from the great lakes, and from the district known as the Eastern Townships, which lies between Montreal and the American frontier; galena, plumbago, and phosphate of lime from Upper and Lower Canada. Building stones and marbles from Arnprior, Gloucester, Montreal, Portage-du-Fort, and Point Claire. A map specially prepared and colored for this exhibition, showing the various localities where the minerals are found, affords a pleasing index to the collection. Of the agricultural products of Canada there is also a fair display. Very fine samples of wheat, barley, rye, and other grains from almost every section of the province, are conveniently exhibited in large glass vials. Specimens of flax, which is now coming generally into cultivation in the provinces, will also attract attention; as well as several specimens of native tobacco. In building and ornamental works, the province is well represented. There are samples, in solids and veneers, of oaks, pines, walnut, maples, &c., &c. There is also what must prove to the ladies a very attractive object — a collection of choice Canadian furs arranged in mosaic. Several articles of fancy and ornamental work made by the aborigines may be said to possess a similar interest. There is a large collection of photographic views, for which the climate of Canada is so favorable, and a few water-color drawings of more than common merit; the subjects in both cases being mostly Canadian.

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LITERATURE.

POETRY.

(Written for the *Journal of Education.*)

OUR SUMMER EVENINGS.

BY MRS. LEPROHON.

The rose tints have faded from out of the west,
From the mountain's high peak, from the river's broad breast,
And silently shadowing valley and rill,
The soft noiseless twilight steals over the hill.
Behold in the depths of blue ether afar
Now softly emerging each glittering star,
Whilst later the moon, placid, solemn and bright,
Floods earth in her tremulous, silvery light.

Hush! list to the Whip-poor-will's soft, plaintive notes,
As up from the valley, the lonely sound floats—
Inhale the sweet breath of yon shadowy wood
And the wild flowers blooming in hushed solitude—
Start not at that whispering, 'tis but the breeze
Low rustling mid maple and lonely pine trees,
Or willows and alders that fringe the dark tide
Where canoes of the red men oft silently glide.

See, rising from out of that copse wood dark, damp,
Gay fire-flies each with its bright, tiny lamp,
Quick gleaming and streaming like meteors swift
O'er hill side and meadow and ravine's dark rift,
Contrasting with ripple on river and stream
Alternately playing in shadow or beam
Till fulness of beauty fills hearing and sight
As we muse through the hours of a calm summer's night.

CANADIAN HISTORY.

A Representative Man.--1758.

M. LUC DE LACORNE SAINT LUC.

If there be an era in the primitive times of Canada, in which the martial spirit of its inhabitants shone forth more brightly than at others, of a verity it is that war-like period which immediately preceded the cession of the country by the French Crown, known to our historians as the "seven years' war." Nowhere in the annals or records of the past, did the Canadian militia and volunteers exhibit greater endurance,—more perseverance,—more stout and successful resistance on many a hard-fought battle field; though after all, it must have mattered little what the French commanders did achieve, having at their disposal merely a handful of regulars, aided by the militia of the country and their Indian allies. France also had in those days its Goldwin Smiths: the colony was voted a bore; and niggardly reinforcements sent out when the whim of the moment prompted—perhaps not at all. Pitt had vowed to plant the flag of England on the summit of Cape Diamond. A gigantic army for those times, 50,000 men—including regulars, New England militia and savages—were to invade Canada at three points: the St. Lawrence,—the lakes,—the interior, under the guidance of Wolfe, Amherst, Haviland, Johnston. Ardent admirers of General Levi, the victor of Murray, have ventured to assert that had this General, who had never suffered defeat, been present at the first battle of the Plains of Abraham, the fate of the colony would have been different; however great the military genius of the hero of St. Foy may have been, at best he could, in the face of the overwhelming forces sent, merely have retarded the fall. At the time we allude to (1758), with much larger armies in the field, a new system of warfare had, to a certain extent, superseded the old desultory mode of attack; the midnight raid and murderous assault of former times—with Indian allies as guides and sharp-shooters—still continued for both combatants to be a military necessity in bush fighting; but the large armies of Europeans, to whom the savages acted as pioneers and auxiliaries, in a measure served as a check on the atrocious and peculiar system of fighting of the latter, although a memorable exception to the rule occurred in the Fort George tragedy; this outrage, however, was chiefly traceable to the effects of the ardent spirits purloined by the redskins from the English camp. Could we reasonably hold European commanders—English as well as French—responsible for the nameless horrors perpetrated on our soil by their Indian allies, one would be apt to believe our European forefathers had left their humanity at home to act the savage on our shores. Take for instance the great Lachine massacre. On the 25th April, 1689, during a profound peace, 1500 savages stealthily surround, before day-break, the habitations at Lachine, nine miles from Montreal; the unsuspecting inmates are soon secured, slaughtered in a few minutes; a lurid conflagration alone marks the spot where once stood a smiling, happy village—men, women

and children are sacrificed indiscriminately. Some are burnt, others disembowelled; mothers made to hold their live infants over the fire and turn the spit; everywhere groans, tortures, despair. Two hundred victims butchered in cold blood, and all this accomplished in less than an hour! "Ils poussèrent, dit Charlevoix, la fureur même à des excès dont on ne les avait pas cru capables. Ils ouvraient le sein des femmes enceintes, pour arracher le fruit qu'elles portaient; ils mirent des enfants tous vivants à la broche et contraignirent les mères de les tourner pour les faire rôtir. Ils inventèrent quantités d'autres supplices inouis, et deux cents personnes de tout âge et de tout sexe périrent ainsi en moins d'une heure dans les plus affreux tourments."

These scenes, Charlevoix relates, were repeated within one league of the city, and only when these infuriated demons were satiated with human gore, did they retire with two hundred prisoners whom they afterwards burnt. The island of Montreal remained in their possession until the fall following. In October, an Indian ally of the French, whom they had tortured and hacked, escaped and apprised the French that the Indians intended returning in the winter to have a repetition of these sickening horrors at the town of Three Rivers, after which Quebec was to be visited on the same errand; that when they would have extirpated the French settlers to the last man, they would meet in the following spring an English fleet at Quebec (no doubt Phipps' ships, which did appear before Quebec in October, 1690). Providence frustrated their dire designs. Of course, such doings were not confined to the allies of the New-Englanders. The savages in league with the French carried fire and the sword amidst the peaceful dwellers of the adjoining English provinces; Schenectady as well as Lachine has its bloody records. Our early history teems with such incidents. Happily the extension of the colony in 1758, and the rapidly-increasing power of the whites was calculated to render these scenes less frequent.

Apart from the several European commanders who acquired fame during the seven years' war, some of the settlers or *habitants* (1) of Canada became famous in battle. It is one of the most remarkable soldiers of that day we propose sketching here—M. Luc De LaCorne Saint Luc, previously introduced to our notice in Mr. De Gaspé's book, *The Canadians of Old*, and in the *Maple Leaves*, as one of the few survivors in the shipwreck of the *Auguste*, 1761, on its voyage to France with the French refugees. The career of De LaCorne also commends itself to our attention from its analogy to that of other Canadians of later days: he fought as bravely under the flag of St. George, when it became that of his country, as he had done previously when the lily-spangled banner of the French monarch waved over the home of his youth. Being no utopian, LaCorne cheerfully accepted the new *régime* under which his hitherto distracted country was destined to enjoy peace, liberty and prosperity. Being a man of mark, talent and courage, high civil and military honors were soon within his reach. We purpose in this paper viewing the Chevalier De LaCorne as the type of the *Canadians of Old*, the representative man of that thrilling era of 1758—Carillon and its glories—when every Canadian peasant was a soldier, and when the parishes were so drained of their able-bodied men that the duties of husbandry devolved *entirely on the women and children*. History makes mention of two LaCornes. De LaCorne La Colombière, who commanded in Acadia, and fought with success against the English in 1756—he returned to France at the time of the conquest and became the friend and companion of the famous naval commander, De Suffren, in his sea voyages. The other, the subject of this notice, LaCorne de Saint Luc, a "Chevalier de Saint Louis," was a most influential personage both amongst the Canadians and amongst the Indian tribes, under French and under English rule; one of his first feats was the capture of Fort Clinton in 1747. He also, at the head of the Canadians and Indians, distinguished himself at the battle of Carillon (Ticonderoga), in 1758, were Abercrombie was defeated by Montcalm and Lévis; LaCorne captured from the English General one hundred and fifty waggons of war stores. After serving through the hard-fought engagements of the campaign, we find him subsequently at the Battle of the Plains of Abraham; we thence follow him to Montreal, and see him under General Lévis at the head of his old friends, the Canadians and the Indians; in April following he was wounded at Murray's defeat on the St. Foy heights, and took a prominent part in the last victory of the French in Canada—a battle which permitted them, on leaving the country, to shake hands with their brave antagonists, the English. (1) In 1761 he decided to return with his brother, his children and nephews to France, and, having *plenty* of ready money (some £6,000), he was on the eve of purchasing a vessel at Quebec in September of that year for that purpose, when the generosity of General Murray made this unnecessary, and the *Auguste* was fitted up at Government expense. In this ill-starred ship, LaCorne and one hundred and twenty of the chief persons in the colony, including several ladies, officers and soldiers, sailed on the 17th October, 1761. The chevalier has left a Journal or Diary, kept by himself, of the appalling disaster which befel the *Auguste* on the coast of Cape Breton, where the ship was stranded on the 15th November, 1761. This narrative, (1) which has recently been published, is affecting from its truthfulness and simplicity; no boasting, no flourishes of rhetoric in this short record of death and human suffering. On reading of the seven survivors,— out of one hundred and twenty-one souls,—slowly wending their way over the foggy and snow-clad sea shore of *Isle Royale*, occasionally one dropping down benumbed, fatigued and exhausted, to sleep the long sleep of death, one is reminded of another gallant band who nearly a century later on, a few degrees closer to the pole, could be seen equally forlorn; they too dropped down and died as they walked along the ice-clad strand; "some were buried and some were not," as the old Esquimaux woman stated to McClintock's party—the latter was Sir John Franklin's devoted but despairing followers. We shall condense LaCorne's narrative of the shipwreck. The ship struck on the 15th November; LaCorne and his six surviving companions, including the captain, were washed ashore in a boat, more dead than alive; the 16th was employed in digging graves; none of his children, none of the ladies had been saved; the young, the fair, the highborn strewing in hideous confusion a rock-bound coast amidst fragments of the wreck,—in all one hundred and fourteen corpses. Such were the dismal objects which met the gaze of LaCorne and of his fellow-sufferers on the morning of the 16th November. Amidst the roar of the sea and of the tempest the last rites were performed by the sorrowing parent; and on the 17th, with a common feeling, all hurried from a spot in which everything reminded them of death, "*plurima mortis imago*," and took to the woods, not knowing where they were; on the 17th a snow storm added to their misery; three of the party here gave out through fatigue, but LaCorne, who all along appears as the leading spirit, urged them on, and with success; on the 25th the Journal mentions, as a godsend, the discovery of some deserted huts; —in them they found two dead men; on the 26th two more of the party gave out, and were reluctantly left behind with some provisions. Twelve inches of snow had fallen that day.

On the 3rd December, after a tedious tramp through the forest, not knowing where they were, they struck on the sea coast and discovered an old boat, unseaworthy; the captain of the *Auguste* set to work to caulk her, and matters seemed likely to assume a more hopeful aspect, when a fresh snow-storm nearly caused the destruction of the whole party. "Our provisions running short," adds LaCorne, "we had to live on wild berries and sea-weed. On the 4th, the storm having abated, we found our boat imbeded in the snow, but when we came to launch her, our captain, who until then had held out, declared he could go no further on account of the pains and ulcers he labored under; the three others mostly as bad, sided with him, and being alone, I was compelled, although suffering much less, to remain with them. I did not like to desert them, and we trusted to Providence, when two Indians made their appearance. Our men hailed them with loud cries and lamentations; in which I could catch the words 'have mercy on us.' I was then smoking, a quiet spectator of this sorrowful scene. Our men mentioned my name, and the Indians greeted me warmly. I had on several occasions rendered service to these tribes. I learned that we were ninety miles from Louisbourg (Cape Breton). They told me they were ready to conduct me to St. Pierre. I had our men crossed over a river which was there, and left with the Indians, for their wig-wam was about three leagues distant. They gave me dried meat, and on the 5th I returned to my friends."

Thence we follow the hardy adventurer to St. Pierre, to Labrador Bay, and finally we find him, in spite of all remonstrance, starting in a birch canoe, in that inclement season, with two young men whom

(1) *Habitants:* here is a word whose meaning has been singularly perverted. *Habitant* meant formerly the permanent settler, who came to *habiter le pays*, in contradistinction to the military and civil functionaries who were transient. The richest merchant might be a *habitant:* that is a permanent resident.

(1) How singular are the fortunes of war! Wolfe, Amherst, and several other English officers, who, under the "butcher" Cumberland and under Ligonier, had been disastrously defeated by Marshal Saxe, at Fontenoy and Laufeldt, met on the Plains of Abraham their old rivals, with Scotch Jacobites fighting on both sides. A few months later and the second battle of the Plains—a brilliant though bootless victory—again asserted the martial qualities of the French legions.—(J. M. L.)

(2) Journal du naufrage de l'*Auguste* par M. Luc De LaCorne Saint Luc, en 1761—Côté et Cie., Québec.

he had tempted to this fool-hardy entreprise, by offering them twenty-five louis d'or: they afterwards landed at Cheda-Bouctou, and after encountering great privation, fatigue, and divers perilous adventures, he arrived at Ford Cumberland, when after a short rest he continued his journey on foot, having worn out his strength and his snow-shoes. The Temiscouata portage brought him subsequently to the lower parishes, then to Kamouraska; and the night he spent at the Manor of St. Jean Port Joli is graphically described in the *Canadians of Old*. He arrived at Quebec on the 23rd February, laid an account of his shipwreck before General Murray, and left for Montreal to see General Gage. This man of iron winds up his Journal by stating that the fatigues, dangers and starvation he was exposed to were very great—that the circuitous road he followed led him to believe he must have walked at least 1650 miles in the severest season in the year, and unprovided with any succour. "I used to see my guides and companions, the Indians and Acadians, giving out after eight days' marching, and often less. During all this time, I enjoyed excellent health, had no dread of the consequences, and fortunately withstood so much fatigue; had I had guides as vigorous as myself, I would have saved one hundred and thirty pounds which it cost me, and I would have arrived earlier." General Jeff. Amherst, then at New-York, wrote to the chevalier a feeling letter, dated 28th March, 1762, condoling with him on this melancholy shipwreck.

We have no hesitation in saying that this feat of human endurance, this journeying during a Canadian winter through forests,—over bays in a frail bark canoe and frozen snow on snow-shoes, some seventeen hundred miles, is almost without a parallel in modern times, and that we would be very unwilling to accept it as the truth, were it less authentically recorded.

The loss of family and friends, as previously stated, seems to have changed entirely the future plans of the chevalier; he bid adieu to La Belle France, and made up his mind to live in Canada—a British subject. We fail for a few years to trace clearly what occupations were followed by this singularly hardy man; problably, with his compeers, the Rocheblaves, DeRouvilles, St. Ours, Deschambault, DeBellestre, De Lotbinière, he took part in politics. At the arrival of General Burgoyne, LaCorne agaiu, although close on seventy years of age, headed the militia and the Indian tribes which Sir Guy Carleton sent to assist the newly-arrived General. LaCorne was present at several engagements during the war of independence, and probably would have rendered important services to the English General, but Burgoyne neither understood nor took any pains to understand the character of his Indian allies. Matters went on tolerably well so long as the English commander met with success, but with reverse, discontent got to such a pitch in a short time that the Indian tribes and the small number of Canadians soon absolutely refused to be led on by a general about as fit to handle this arm of the service as the Baron Dieskau had shown himself twenty years before. The disgraceful capitulation of the English army at Saratoga to General Gates was the crowning feat. In vain Burgoyne, (1) on his return to England, and from his seat in Parliament, supported by a host of powerful friends, tried to explain off the shame he had brought on his brave army by accusing others; his violent, artful charges called forth a spirited letter from the Chevalier LaCorne, which appeared at the time in the English papers. It being, doubtless, new to many English readers, a translation of this letter from old memoirs may prove acceptable:—

LE CHEVALIER DE ST. LUC TO GENERAL BURGOYNE.

"Quebec, 23rd October, 1778.

"Sir—I cannot say whether this letter will reach you; if it should, it is written to express my surprise at your lack of memory concerning myself and also concerning my companions-in-arms, the Canadians and Indians.

"I am at a loss to guess your motive, unless it be to bury my name, with your own, in obscurity—an achievement beyond your power. I was known long before you had attained the position which furnished you the opportunity of ruining one of the finest armies which my country ever saw.

"You say, sir, that I was unable to afford you any information; I am glad you should be the means of informing the public that you never sought advice from me. Allow me, however, to tell you that I have served under general officers who honored me with their confidence; men worthy of the position,—able to maintain their dignity, —distinguished by their abilities.

"You also charge me with having withdrawn from the army. You will permit me to inform you, sir, that those who, like myself, left it, did not, more than you, dread the perils of war. Fifty years' service will dispose of this charge. You, sir, better than any, know who made me leave the army—it was yourself.

"The 16th August, 1777, the day of the Bennington affair, you sent me, through Major Campbell, an order to hold myself in readiness to start on the morning of the 17th, with the Canadians and Indians, ahead of General Fraser's brigade, to post ourselves at Stillwater. But that same day M. de Lanaudière informed you of the defeat of Lieut.-Col. Baum's detachment, and of that of Lieut.-Col. Breyman, who had advanced to support the latter. He apprised you that these two detachments had lost at least seven hundred men. You appeared to put little faith in his statement, and you told me the loss did not amount to one huudred and fifty men, although the real figure showed that the first report was exact. Counter orders were then issued to the whole army which had intended to march on that day, and the next day we were made to cross North River, and, with General Fraser's brigade, to camp at Battenkill. The Indians, startled by your grand manœuvres, to which they were not accustomed, had noticed that you had sent no force either to collect the remnants of the corps dispersed at Bennington (some of whom, to my knowledge, returned to your camp five days after), or to succour the wounded, of which a portion were dying. This conduct of yours, sir, did not convey a very high idea of the care you would take of those who might fight under you. The indifference you exhibited to the fate of the Indians concerned in the Bennington encounter, to the portion of one hundred and fifty, had disgusted them very much; a good number of them had fallen there together with their great chief, and out of the sixty-one Canadians forty-one only had escaped.

"Bear in mind, sir, so that you may not form an erroneous opinion of this matter, what passed in council, when you represented our loss as trifling. I told you, on behalf of the Indians, whose interpreter you had made me, that they were very deserving. They said many things which it would have been useless to repeat; amongst others, that they wished to speak their sentiments to you in plain terms. I warned you of what would be the final result. Finally, sir, their discontent became such that they left on the spot, although you refused to allow them provisions, shoes and an interpreter.

"Two days subsequently, you had seen your error; Brigadier Fraser had anticipated what would be the consequences of your acts towards the Indians. You then sent for me, and I had the honor to meet you in the tent of the brigadier, when you asked me to return to Canada, the bearer of despatches to General Carleton, to induce His Excellency to treat the Indians kindly and send them back to you. I did so, and I would have rejoined the army, if the communication had not been cut off. After that, of what use could I have been, I, whom you had represented as good for nothing, and as one of the Indians who left the army. Ah! sir, having ceased to be a General, do not at least cease to be a gentleman! On the latter point I am your equal. You bear the rank of a General, and I may not be your equal in talent, but I am your equal in birth, and claim to be treated as a gentleman.

"Be that as it may, sir, notwithstanding my advanced age (67 years), I am ready to cross the sea to justify myself before the King, my master, and before my country, of the unfounded charges you have heaped on me, but I am quite indifferent as to what you personally may think of me."

A Legislative Councillor of Canada, in 1784, we find this sturdy old soldier at the ripe age of 74, equally ready in camp and in council,—manfully battling for the right of his countrymen to enjoy all the privileges of British subjects, and siding against the old family compact,—remonstrating loudly but respectfully, and holding forth in the resolutions he proposed, in favor of the constitution of 1774. When the stern old Roman died does not appear; he seems to have attained a very great age.

In a measure, are we not justified of saying of him what Clarendon wrote of Hampden, "that he was of an industry and a vigilance not to be tired out or wearied by the most laborious, and of parts not to be imposed on by the most subtle and sharp,—of a personal courage equal to his best parts?"—*Maple Leaves.*

J. M. LeMoine.

(1) John Burgoyne, an English general officer and dramatist, connected with this country in the former capacity, was the natural son of Lord Bingley, and entered early in the army. In 1762 he commanded a force sent into Portugal for the defence of that kingdom against the Spaniards. He also distinguished himself in the first American war by the taking of Ticonderoga, but was at last obliged to surrender with his army to General Gates at Saratoga. For this act he was much censured and condemned by all the English people. He was elected into the English Parliament for Preston, in Lancashire, but refusing to return to America pursuant to his convention, was ignominiously dismissed the service. He endeavored to exonerate himself, but without avail, in some pamphlets he published in defence of his conduct. As an author, he is more distinguished for his three dramas of the *Maid of the Oaks*, *Bon Ton*, and *The Heiress*, all in the line of what is usually called genteel comedy, they forming light and pleasing specimens.—M. B. L.

SCIENCE.

North Polar Exploration.

BY CLEMENTS R. MARKHAM.

(Continued.)

One of the greatest scientific *desiderata* of the age is the accurate measurement of an arc of the meridian near the Pole, and this object alone would justify the despatch of a scientific expedition. By the measurement of these arcs in different latitudes, the length of a degree has been found to increase in regular proportion from the equator towards the Pole. The most northern measurement hitherto made is in latitude 66°.20 N. No measurement has been made sufficiently near the Pole, and it is of the utmost importance that this should be done, in order to ascertain the shape of our planet with scientific accuracy. It is not a subject to be touched upon lightly, for few people are fully aware of its difficulties, and of the extreme accuracy which is absolutely necessary in the observations. Still it is to be done, and the western coast of Smith Sound, between latitudes 78° and 82°, is the place to do it. (1)

The science of hydrography will be advanced, and some of its chief problems connected with equatorial and polar currents will be solved by a Polar expedition. The Polar region may be covered with ice, or considerable seas may be produced by the action of these curents during the summer. General Sabine believes it to be far from improbable that the equatorial stream may produce abnormal effects in the far north, and be the cause of iceless seas during the summer, teeming with animal life. It is surely a matter of deep interest to discover the actual condition of this secluded ocean, which has never yet been cut by keel of mortal ship.

But although no vessel has ever entered those silent seas, there is every reason to believe that scattered tribes of men will be found on their shores, even up to the Pole itself, wherever the current keeps lanes and water-holes open during the winter. A study of the probable origin and migrations of the Greenland Esquimaux enables us to trace hardy tribes of wanderers from the northern shores of Siberia, where their ruined *yourts* and stone fox-traps were seen by Wrangell, along the whole length of the Parry Islands, which are strewn with exactly the same traces; and thus we follow their long wanderings, until their descendants are found at the head of Baffin's Bay. There the " Arctic Highlanders" at length found a land suited for a permanent abode of human beings, and thence parties may be supposed to have wandered south along the coast of Greenland, and north into the unknown Polar region, wherever there was land and open water. We know that they must have travelled round the northern end of Greenland, for Clavering found two families of Esquimaux on the east coast, to the northward of Hudson's Hold-with-Hope. Scoresby gives instances of stone darts, such as are used by no known people on this earth, having been found imbedded in the blubber of captured whales. These whales had escaped from the mysterious hunters of the Pole, only to yield up their stores of oil to the men of Hull and Aberdeen. The supposed inhabitants of the Polar region must depend on open lanes and water-holes, during the winter, for their existence, for without them there are no walrus, seals, or bears, and therefore no fuel for melting ice. Unacquainted with the use of metals, their implements must be exclusively of bone, stone, or driftwood. Now the discoveries of geologists have recently brought to light the existence of a race of people who lived soon after the remote glacial epoch of Europe, and who were also unacquainted with the use of metals. Their history is that of the earliest family of man of which we yet have any trace, while here, in the far north, there may be tribes living under exactly similar conditions, in a glacial country and in a stone age. A close and careful study of this race, and especially of any part of it which may be met with in hitherto unexplored regions, therefore assumes great importance, and forms a field of research which is well worthy of the attention of future Polar explorers.

(1) On Spitzbergen, which only extends from 76° to 80°, the measurement of an arc will not be so valuable; but it is, however, about to be undertaken by a Swedish scientific expedition.

The grounds for supposing that human beings have extended their wanderings towards the Pole also justify the conclusion that the same region teems with animal life. It is peculiarly important that such a region should be examined in the interests of natural history. Not only may there be opportunities for studying the habits of animals as yet little known, and of discovering the long-concealed haunts of those right whales which have deserted Baffin's Bay, but it is also more than probable that new species may be found in the unknown north. Here may be the last hiding-place of that curious manatee (*Rhytina*), which was last seen by Steller in 1741, off Behring's Island, and which is conjectured by Professor Owen to have been separated from its natural habitat in the Indian Ocean, at some remote period, by the rising of the Asiatic continent. The seas which support whales and seals must be tenanted by myriads of fish, and of those minute organisms which are disclosed by the dredging-machine, while the presence of walrus tells us of submarine forests of sea-weed. The Arctic flora, too, is as yet very imperfectly known, as regards either the land or the sea; and Dr. Kane's expedition alone discovered twenty-seven new species of plants. The recent paper by Dr. Hooker, pointing out the geographical distribution of plants in the Arctic regions, suggests the light that may be thrown upon the interesting problems connected with it, and the incalculable value of researches into the botany of the unknown Polar region. (1)

The investigation of the geological character of the Polar region will throw a flood of light on the world's early history, and will be of incalculable value to science. It must be remembered that no professional geologist has ever been in the Arctic regions, and that the action of the vast glaciers of Greenland, with their mighty icebergs, has never been examined by a trained eye. Yet it is here alone that the condition of that remote period when all Europe was similarly situated, can be satisfactorily studied. The formations hitherto discovered in the Arctic regions, the tertiary lignite of Disco, the carboniferous sandstone of Melville Island, and the Silurian corals, trilobites, and cephalopods of other parts of the Parry group, all indicate a much warmer climate than now exists even in Europe. If similar formations are met with in close proximity to the Pole, we shall learn that there must once have existed conditions of life and heat there which are very different from those now prevailing. We shall receive additional proofs of that great internal heat which appears once to have warmed the earth's crust, and to have produced a rich vegetation in the Arctic zone. The geologists certainly have excellent reasons for the interest with which they regard the proposal to explore these regions.

There are many strange anomalies, too, connected with the meteorology of the North, as hitherto observed. The data already obtained are altogether insufficient to enable men of science to acquire a sound knowledge of the laws which regulate the climate of the Arctic regions. Captain Osborn has well said that nothing could be more deeply interesting than a careful series of meteorological observations within the Polar area.

These are some of the leading results that will be derived from a scientific expedition to explore the North Polar region, and most assuredly they would amply justify its despatch. There are probably many more additions to our knowledge to be secured in that vast area, of which we cannot form a conjecture now; but we know enough to convince all lovers of science that there is great and important work to be done, and that a naval expedition should do it.

It remains to consider the direction from which a Polar expedi-

(1) See *Outlines of the Distribution of Arctic Plants,* by Dr. Hooker. *Transactions of the Linnæan Society*, vol. xxxiii., p. 251.

tion might be undertaken with the greatest probability of success.

There are two accessible approaches to the Polar region, one by the Spitzbergen Sea, between Greenland and Nova Zembla, and the other through Smith Sound, at the head of Baffin's Bay. Looking round the circle formed by the 80th parallel, we see no other suitable opening. Behring's Strait appears to be one, it is true, but beyond it there is the most stupendous accumulation of ice that has ever been met with in the Arctic regions, and the northern openings between the Parry Islands are out of the question. The only routes, then, are those of Spitzbergen and Smith Sound.

The Spitzbergen route was originally proposed by General Sabine, the President of the Royal Society, who developed a plan for attempting it, and it is recommended by four other officers of Arctic experience, Sir Edward Belcher, Admiral Ommanney, Captain Richards, and Captain Inglefield, and also by Admiral Fitz-Roy. The idea appears to be that a base or depôt should be established in Spitzbergen, whence well-found screw steamers may do battle with the pack to the northward for two or three years, if need be, until success is achieved.

The argument in favour of this route is founded on the following considerations:—It is known that the Gulf-stream flows up between Spitzbergen and Nova Zembla, and that it issues south again as an Arctic current. This warm indraught is supposed to cause a navigable ocean, free from ice during the summer; and one theorist maintains that even in the depth of an Arctic winter a vessel may sail without obstruction across the North Pole. But the facts upon which the theory of a Polar basin rests are that Wrangell met with thin and broken ice at a distance of about twenty miles from the Siberian coast, in February, denoting open water; and that Anjou saw the same water-holes off the islands of Kotelnoi and New Siberia. (1) When Barents wintered in Nova Zembla, in 1596, he also saw open water to the northward, in March, after a strong S. E. gale; but as soon as it began to blow from the N. W., the ice returned from that quarter. He naturally concluded, from this movement of the ice, that there must have been open water to the north, into which the ice was blown. The Russians call these water-holes *Polynias*, and they are occasionally seen in all parts of the Arctic regions, even in the depth of winter. They are caused by currents, and in Baffin's Bay also by movements of icebergs. It is obviously absurd for a man standing on the ice, and finding open water before him, to call it an "immeasurable ocean," when he can only see a distance of a few miles. An argument in favour of a warm Polar climate has also been derived from the supposed influence of unceasing sun-light during six months. Scoresby long ago calculated that, at the summer solstice, the influence of the sun is greater at the Pole than at the Equator by nearly one-fourth. But he points out that, on the same principle, the influence of the sun at 78° N. is only $\frac{1}{45}$th less than at the Pole, and also greater than at the Equator. (2) Now at 78° N., the mean temperature of the year is 17° Fahr., and ice is formed during nine months in the Spitzbergen seas, neither calm weather nor the proximity of land being essential to its formation. How, then, can the temperature further north be entirely different? It may readily be admited that those parts of the Arctic zone where there is much land, such as Greenland and the vicinity of the Magnetic Pole, are colder than portions where there is a wide expanse of ocean; but to suppose that this difference is so great as to affect the existence or non-existence of ice is wholly inadmissible, even if the Polar pack did not yield a tangible proof that ice *is* formed round the Pole. Scoresby, by a careful calculation, finds the probable mean annual temperature of the Pole to be + 10° Fahr.

The only sound conclusion that can be arrived at from the above considerations is that the Polar region is frozen over during the winter, with occasional lanes and water-holes kept open by the currents; that this ice drifts south in the summer and autumn, and is gradually loosened and melted at its southern edge by the action of the Gulf-stream, the swell of the ocean, and, in some seasons, by heavy falls of rain; and that young ice forms again, so as to impede and eventually to stop navigation, in September. An expedition taking the Spitzbergen route must therefore force its way through the Polar pack drifting south, before this young ice begins to form, otherwise the season for exploration is lost.

(1) The open water of Middendorf, off Cape Tainiyr, was seen in *August*, when it equally exists in all parts of the Arctic regions.

(2) Solar influence is proportional to the sines of the sun's altitude.

(*To be continued.*)

Leaves from Gosse's Romance of Natural History.

THE MEMORABLE.

Living for years in Newfoundland and Canada, Wilson's *American Ornithology* had become almost as familiar to me as my alphabet, and when at length I travelled into the Southern States, many of the birds which do not extend their visits to the north had become objects of eager interest to me. Prominent among these was the night-jar whose nocturnal utterauces are thought to repeat the words, "chuck-will's widow." I know not what made this particular bird so interesting; perhaps the singularly true resemblance to the human voice of its cry; perhaps the solemn hour of its occurrence, for night-sounds have always an element of romance about them; perhaps the rarity of a sight of the bird; perhaps the superstitions with which it is invested; perhaps all of these combined; or perhaps none of them;—I cannot tell; but so it was: I ardently desired to hear the chuck-will's widow.

I went to the South, and arrived in the hill-country of Alabama as spring was merging into the early summer. I had not been domiciled many days, when one night I remained sitting at the open window of my bedroom, long after the household had retired to bed. It was a lovely night; a thunder-storm had just passed, which had cleared and cooled the air; the moon was in the west, and the stars were twinkling; the rain-drops still hung upon the trees, sparkling as the beams fell on them; the large white blossoms of a catalpa tree were conspicuous just under my window, and gushes of rich fragrance came up from a clematis which thickly covered the trellis-work of the ladies' arbour. The solemn forest, with its serried ranks of primeval trees, girdled-in the little garden, and lay dark and vague beyond. It was too early for the noisy cicadæ that in the later summer make the woods ring with their pertinacious crinking, and not a sound broke the profound silence. Every element was poetry, and my mind was in a state of quiet but high enjoyment. It wanted but a few minutes of midnight, when suddenly the clear and distinct voice of the chuck-will's widow rose up from a pomegranate tree in the garden below the window where I was sitting, and only a few yards from me. It was exactly as if a human being had spoken the words, "chuck—widowwidow." I had not been thinking of this bird, but of course I recognised it in a moment, and a gush of delight and surprise went through me. I scarcely dared to breathe, lest any sound should alarm and drive it away, and my ears were strained to catch every intonation uttered. It continued to repeat its singular call at intervals of a few seconds for about half un hour, when another from a little distance answered, and the two pursued their occupation together, sometimes calling alternately, sometimes both at the same instant. By and by, a third further off in the forest joined them, and the first flew away. The spell was broken, and I went to bed; but even in sleep the magic sounds seemed to be ringing in my ears.

A very vivid emotion of delight was produced in my mind on my visit to Jamaica, by the sight of *Heliconia Charitonia.* The appearance of this fine butterfly is so totally different from that of any of the species with which I had been familiar,—the form is so peculiarly intertropical, so associated with the gorgeous glooms of South American scenery,—that nothing like it had occured to me either in Europe, or in any part of the northern continent. I first saw it fluttering, slowly and fearlessly, over a great thicket of *Opuntia* in full flower, itself a memorable object to behold. The beauty and singularity of the form, the very remarkable shape of the wings, so long and so narrow, the brilliant contrasts of colour with which they are adorned, lemon-yellow and velvety black in bands, and the very peculiar flapping of these organs in flight, as if their length rendered them somewhat unwieldy, altogether took a strong hold on my imagination. I subsequently saw it under circumstances which greatly heightened the interest with which I had first beheld it.

Passing along a rocky footpath on a steep, wooded mountain-side,

my attention was attracted, just before sunset, by a swarm of these butterflies in a sort of rocky recess, overhung by trees and creepers. They were about twenty in number, and were dancing to and fro exactly in the manner of gnats, or as the ghost-moth in England plays at the side of a wood. After watching them awhile, I noticed that some of them were resting with closed wings at the extremities of one or two depending vines. One after another fluttered from the group of dancers to the reposing squadron, and alighted close to the others, so that, at length, when only about two or three of the fliers were left, the rest were collected in groups of half a dozen each, so close together that each group might have been grasped by the hand. When once one had alighted it did not in general fly again, but a new-comer, fluttering at the group, seeking to find a place, sometimes disturbed one recently settled, when the wings were thrown open, and one or two flew up again. As there were no leaves on the hanging stalks, the appearance presented by these butterflies, so crowded together, their long erect wings pointing in different directions, was not a little curious. I was told by persons residing near, that every evening they thus assembled, and that I had not seen a third part of the numbers often collected in that spot.

Another sight which I can never forget is the swarming of *Urania Sloanus* around a blossoming tree at sunrise. This is one of the most gorgeously beautiful of butterflies, its broad wings and body being arrayed in a dress of rich velvet black and emerald green, arranged in transverse bands, with a broad disk of ruddy gold, the whole sparkling with a peculiar radiance, like powdered gems. It is, besides, an insect of unusual interest to the philosophic entomologist, because it is one of those transitional forms by which great groups are linked together. Every one would say, on looking at it, that it is a butterfly, and yet it possesses the technical characters of a moth.

At a certain season, in Jamaica, viz., in the first week of April, with very accurate regularity, this magnificent insect suddenly appears in great numbers. The avoçada pear, a kind of *Laurus*, whose fruit is much esteemed, is then in blossom, and is the centre of attraction to these butterflies. As the approaching sun is casting a glow of gold over the eastern sky, one after another begins to come, and by the time the glorious orb emerges from the horizon, the lovely living gems are fluttering by scores, or even by hundreds, around some selected tree. The level sunbeams, glancing on their sparkling wings, give them a lustre which the eye can scarcely look upon; and, as they dance in their joyousness over the fragrant bloom, engage in the evolutions of playful combats, or mount up on the wing to a height of several hundred feet above the tree, they constitute, in that brief hour of morning, a spectacle which has seemed to me worth years of toil to see.

Very few persons capable of appreciating the interest of the spectacle have ever beheld the gorgeous bird of paradise in his remote equatorial forests. The land in which it dwells is still a *terra incognita* to science. Nearly all the world has been laid open to the perseverance of modern explorers; but the sullen ferocity of the savages of New Guinea, and their hostility to strangers, keep us to this day in ignorance of the largest island of the world. A few glances at the coast, obtained by adventurous travellers, who, well armed, have penetrated a mile or two from the sea, have only served to whet curiosity, and to stimulate desire for an acquaintance with the productions in which it appears so rich.

Specimens of the birds of paradise had found their way to Europe, through the native traders of the Oriental Archipelago, and their surpassing gorgeousness of plumage had disposed the credulous to receive the fabulous narrations with which their history was invested. Gradually these absurdities were exploded; but still no naturalist had ever beheld the birds in native freedom, till M. Lesson, the zoologist attached to one of the French exploring expeditions, touched at the island. He diligently used the few days' stay he made on the coast, and obtained a score of the birds. Thus he narrates his first observation of the living gem:—

"Soon after my arrival in this land of promise for the naturalist, I was on a shooting excursion. Scarcely had I walked some hundred paces in those ancient forests, the daughters of time, whose sombre depth was perhaps the most magnificent and stately that I had ever seen, when a bird of paradise struck my view; it flew gracefully, and in undulations; the feathers of its side formed an elegant and aerial plume, which, without exaggeration, bore no remote resemblance to a brilliant meteor. Surprised, astounded, enjoying an inexpressible gratification, I devoured this splendid bird with my eyes; but my emotion was so great that I forgot to shoot at it, and did not recollect that I had a gun in my hand till it was far away."

The bright spot in the memory of Audubon, the enthusiastic biographer of the birds of America, was the discovery of the fine eagle which he has named "the Bird of Washington." "It was on a winter's evening," he observes, "in the month of February 1841, that, for the first time in my life, I had an opportunity of seeing this rare and noble bird, and never shall I forget the delight it gave me. Not even Herschel, when he discovered the famous planet which bears his name, could have experienced more happy feelings; for to have something new to relate, to become yourself a contributor to science, must excite the proudest emotion of the human heart. We were on a trading voyage, ascending the upper Mississippi; the keen winter blasts whistled over our heads, and the cold from which I suffered had, in a great degree, extinguished the deep interest which, at other seasons, this river has been wont to awake in me. I lay stretched beside our patroon; the safety of the cargo was forgotten; and the only thing that called forth my attention was the multitude of ducks, of different species, accompanied by vast flocks of swans, which from time to time would pass us. My patroon, a Canadian, had been engaged many years in the fur-trade: he was a man of much intelligence, who, perceiving that these birds had engaged my curiosity, seemed only anxious to find some new object to divert me. The eagle flew over us. "How fortunate!" he exclaimed; "this is what I could have wished. Look, sir! the great eagle; and the only one I have seen since I left the lakes." I was instantly on my feet; and having observed it attentively, concluded, as I lost it in the distance, that it was a species quite new to me."

It was not till some years afterwards that he had an opportunity of seeing this rare and noble bird again. On the face of a precipice was the nest of what the country people called the "brown eagle," and some peculiarities in the situation induced the ornithologist to hope that it might be the species of which he was in quest. He determined to see for himself. "In high expectation," he continues, "I seated myself about a hundred yards from the foot of the rock. Never did time pass more slowly. I could not help betraying the most impatient curiosity, for my hopes whispered it was the great eagle's nest. Two long hours had elapsed before the old bird made his appearance, which was announced to us by the loud hissings of the two young ones, who crawled to the extremity of the hole to receive a fine fish. I had a perfect view of this noble bird, as he held himself to the edging rock; his tail spread, and his wings partly so, and hanging something like a bank swallow. I trembled lest a word should escape from my companions—the slightest murmur had been treason from them; they entered into my feelings, and, although little interested, gazed with me. In a few minutes the other parent joined her mate, which, from the difference in size (the female being much larger), we knew to be the mother-bird. She also had brought a fish; but, more cautious than her mate, ere she alighted, she glanced her quick and piercing eye around, and instantly perceiving her procreant bed had been discovered, she dropped her prey, with a loud shriek communicated the alarm to the male, and, hovering with him over our heads, kept up a growling, threatening cry, to intimidate us from our suspected design."

Tempestuous weather prevented access to the nest for several days, at the end of which time it was found that the young had been removed by the parents. "I come at last to the day I had so often and so ardently desired. Two years had gone by since the discovery of the nest, but my wishes were no longer to remain ungratified. I saw one day one of these birds rise from a small inclosure, where some hogs had been slaughtered, and alight upon a low tree branching over the road. I prepared my double-barrelled piece, which I constantly carry, and went slowly and cautiously towards him; quite fearless, he awaited my approach, looking upon me with an undaunted eye. I fired, and he fell; before I reached him he was dead. With what delight I surveyed this magnificent bird! I ran and presented him to my friend, with a pride which those can only feel who, like me, have devoted their earliest childhood to such pursuits, and have derived from them their first pleasures; to others, I must seem "to prattle out of fashion.""

The entomological cabinets of Europe have long counted as one of their most prized treasures, a gorgeous butterfly named *Ornithoptera Priamus*. Linnæus named those butterflies which are included by modern naturalists under the family *Papilionidæ Equites;* and he divided them into Greeks and Trojans, naming each individual species after some one of the Homeric heroes, choosing a name from the Trojan list, if black was a prominent colour, as if mourning for a defeat, and from the Greeks if the prevailing hues were gay. The one I speak of was called after the king of Ilium, because it was the finest species of the butterfly then known. It is found only in Amboyna; its elegant wings expand fully eight inches, and they are splendidly coloured with the richest emerald green and velvety black.

Other species of the same noble genus have recently been discovered in the same Archipelago; but the Trojan monarch remained without a rival. About a year ago, however, Mr A. R. Wallace, an accomplished entomologist, and one who has had a greater personal acquaintance than any other man of science, with the Lepidoptera of

the very richest regions of the globe—Brazil, and the Indian Isles,—announced by letter the discovery and capture of a still more magnificent species. Having arrived at Batchian, one of the isles of the eastern part of the Archipelago, on an entomological exploration, he presently caught sight of a grand new *Ornithoptera*, which, though the specimen was a female, and escaped capture, gave promise for the future. At last the expected capture was made, and Mr. Wallace thus records his emotions on the occasion;—emotions, it must be remembered, of no tyro, but of a veteran insect-hunter:

"I had determined to leave here about this time, but two circumstances decided me to prolong my stay: *first*, I succeeded at last in taking the magnificent new *Ornithoptera*, and, *secondly*, I obtained positive information of the existence here of a second species of *Paradisea*, apparently more beautiful and curious than the one I have obtained. You may, perhaps, imagine my excitement when, after seeing only two or three times in three months, I at length took a male *Ornithoptera*. When I took it out of my net, and opened its gorgeous wings, I was nearer fainting with delight and excitement than I have ever been in my life; my breast beat violently, and the blood rushed to my head, leaving a headache for the rest of the day. The insect surpassed my expectations, being, though allied to *Priamus*, perfectly new, distinct, and of a most gorgeous and unique colour; it is a fiery, golden orange, changing, when viewed obliquely, to opaline-yellow and green. It is, I think, the finest of the *Ornithopteræ*, and, consequently, the *finest butterfly in the world!* Besides the colour, it differs much in markings from all the *Priamus* group. Soon after I first took it, I set one of my men to search for it daily, giving him a premium on every specimen, good or bad, he takes; he consequently works hard from early morn to dewy eve, and occasionally brings home one; unfortunately, several of them are in bad condition. I also occasionally take the lovely *Papilio Telemachus*."

The sight of so noble an aquatic plant as the gigantic *Victoria regia*, the rosy-white water-lily of South America, reposing on one of the glassy igaripès of the mightiest river in the world, must be an incident calculated to excite enthusiasm in any lover of the grand or the beautiful in nature. Thus speaks Schomburgk, to whom we owe our knowledge of this magnificent plant, and its introduction to the aquaria of Europe! "It was on the 1st of January 1837, while contending with the difficulties which, in various forms, nature interposed to bar our progress up the Berbice river, that we reached a spot where the river expanded, and formed a currentless basin. Something on the other side of this basin attracted my attention; I could not form an idea what it might be; but, urging the crew to increase the speed of their paddling, we presently neared the object which had roused my curiosity, and lo! a vegetable wonder! All disasters were forgotten; I was a botanist, and I felt myself rewarded."

Mr. Bridges, too, in the course of a botanical expedition in Bolivia, speaks of the delighted surprise with which he first gazed on the lovely queen of water-lilies. "During my stay in the Indian town of Santa Anna," observes this traveller, "in June and July 1845, I made daily shooting excursions in the vicinity, and on one occasion I had the good fortune, while riding along the wooded banks of the Yacuma, a tributary of the Mamoré, to arrive suddenly at a beautiful pond, or rather small lake, embosomed in the forest, where, to my delight and surprise, I descried for the first time the queen of aquatics, *Victoria regia!* There were at least fifty flowers in view; and Belzoni could not have been more enraptured with his Egyptian discoveries, than was I, on beholding this beautiful and novel sight, which few Englishmen can have witnessed. Fain would I have plunged into the lake to obtain specimens of the splendid flowers and foliage; but the knowledge that these waters abounded with alligators, and the advice of my guide, deterred me."

In the travels of Mungo Park in the interior of Africa, he is said to have been at one time so exhausted by fever, and so depressed with his forlorn and apparently hopeless condition, that he had laid down to die. His eye, however, chanced to light on a minute moss, with which he had been familiar in his native Scotland. The effect on him was magical; the reflection instantly occurred, that the same Divine hand which made that little plant to grow beneath that burning clime was stretched out in loving care and protection over him; and, smiling amidst his tears, he cast himself on the love of his heavenly Father, and was comforted. We may well believe that the sight of the fork-moss would ever afterwards call up a vivid recollection of that desolate scene, and that he could never look on it without strong emotion.

(*To be continued.*)

EDUCATION

Hints to Teachers.

1. The two fundamental questions which educators and inspectors have to deal with are the high value of education to society, and how most effectually to bless society with the precious boon.

2. Every effort should be made by teachers to make the study of school work WELL OCCUPY THEIR THOUGHTS, and STIR UP THEIR FACULTIES TO INTELLIGENT, WELL DIRECTED EFFORT.

3. Habited with the unvaried character of regularity, punctuality, professional skill and trained effort, the teacher is prepared for his position.

4. To every teacher I would say, earnestly consider these; and keep education before your eye in an extended sense. The more enlarged your ideas of instruction are, the better both for your school and your scholars. Your aims will become higher; your efforts will become energetic; and your zeal more enlightened.

5. The subject of education in all its branches and stages, from the simplest infant lispings to its highest stages, requires, to do justice to this work of works, the highest possible training, and enlightened qualifications.

6. Therefore, no man, nor class of men needs more to cultivate the mind than the teacher, nor show more energy of character and firmness of mind, skill in working, nor judgment in commanding.

7. One of the very first things to which the attention of the teacher, on taking charge of a school, should be directed, is school organization, which has respect to all those mechanical arrangements, appliances, and artifices, by which the business of instruction may be facilitated and promoted. This demands his special study.

8. For one of the most essential parts of the machinery of a good school is an effective routine,—a routine embracing in successive order every part of school work in a well planned and digested scheme.

9. All the arrangements of a school should be formed with reference to economy of time, punctuality, attention, method, diligence, cleanliness, &c.; and in such ways as to bring the mind of the scholar in contact with the teacher at regular stated times—in a way expressive of order and obedience well established.

10. In commencing to teach, study closely the character of your scholars, their dispositions and capacities.

11. And first in every thing, propose to yourself a well determined aim. Trace out before hand the course of studies you mean to undertake. And then put your hand resolutely to the work, trusting for success to your own conscientious devotedness, and the help of God.

12. Make yourself felt throughout all the details of your teaching; be, as it were, everywhere; and show yourself always the most devoted, the most laborious, and the most persevering party in the school.

13. Guard against that dull routine which is the death of teaching. Every part of your work should show life, energy, judgment.

14. Try always so thoroughly to master whatever you profess to teach, as to be relieved from the necessity of ever and unceasingly recurring to your text-books. One teaches ill that of which he himself knows but little.

15. Make yourself always understood. Let your language be level with the capacity of your pupils.

16. Distinguish well between the mere child and the more advanced scholar. If it suffices for you to obtain the attention of the child, exercise his memory, and impress on his mind, through the understanding, a simple outline knowledge suited to his capacity and the developed state of his mind.—This is not sufficient for the more advanced boy: he wishes to know the reason of things, and his judgment must be appealed to and carefully cultivated. His faculties have to be developed, trained and suitably exercised.—You must, therefore, proportion and suit your teaching to the exigencies of different ages.

17. To this end be ever adding to your stores of knowledge: read, study, experiment, and familiarize yourself with the different capacities of your pupils,—their mental moulds, the peculiarities of their minds in their development, &c.

18. Cultivate a spirit of progress; for it alone can sustain you to a proper height; and animate your pupils with the same admirable sentiment.

19. Never attempt the impossible. To labour, that you may spare to your scholars the trouble of labour; to think, that you may relieve them of the fatigue of thinking; to so refine upon methods as to convert teaching into a sort of game or amusement—*is the most foolish of all enterprises.* On the contrary, study supposes—demands *hearty effort* from the pupil. Your effort without this hearty concert is nigh a nullity. Train the pupil to labour—but encouragingly—till it becomes a habit. This will be to him a blessing, and to you a guarantee of success in teaching him.

20. However, push not a pupil beyond his strength. Neither over excite nor lull his faculties; but form and develope them with that temporate wisdom which nature dictates, by such means as she has furnished.

21. The first lessons are the most important. By them intellectual habits are formed, and the understanding is moulded. Let your first lessons, then, be simple and precise, clear and impressive, and the facts of the lessons repeated, and in the simplest language, till they receive a lodgment in the mind.

22. Advance slowly, that you may advance surely, but always advance.

23. And far from advancing rapidly, as many do, with a few of your pupils who take the lead, return often to FIRST STEPS with all. Drill on those with thoroughness; and especially with reference to the REAR part of the class or section. By repetitions only can impressions be deepened and the memory strengthened.—We give and repeat the giving, that the pupil may get and retain. We expound and illustrate that he may get aud understand, and that what he thus gets he may be able to use as materials for working and improving his own mind.

24. But let me enlarge a little on these ideas. A rich educative vein here opens up.—Be not satisfied because your pupil's mind is enriching with ideas, and so linked as to become suggestive, each of the other. The value, the multifarious uses of the mental treasure so acqnired have to be taught.—This part of teaching, to the intelligent, full minded teacher, who has a command over himself and has a command over his scholars, opens up a wide field of observation and consideration for exercising his skill, in showing the uses and applications of the truths taught and the principles expounded. When this part of the work is efficiently done, excellent training effects are produced. The faculties are brought out—strengthened and expanded—enriched and ennobled—enlightened and stimulated, and so growing in fitness, each for its work. No part of the work is of more importance than this; yet in many schools it is one of the most neglected. A fact is told me, a truth is explained to me, a principle is unfolded, a rationale is illustrated, and why?—All this doing must have an object—MANY objects in view. From the facts, the truths taught, lessons have to be drawn, and their uses pointed out; from principles applied and rationales expounded, the purposes and advantages of their application must, to render them valuable to the receiver, be clearly explained and well understood by examples, given first by the teacher, then by the scholar.—Many may object to this part of school training, on account of its difficnlty.—But the question is not as to its difficulty, bnt as to its necessity.—The happiness, the improvement of society are linked with it; the onward march of the hnman mind and of the world make it all a necessity; and the difficulties which lie in the way, are difficulties which have very agreeable concomitants—concomitants which co-aid in producing highly beneficial effects, giving zest to enjoyment, and value to the results of labour.—Away then with the idea of difficulty! The Creator, and for purposes infinitely wise, has stamped difficulty on all man's labour. But he has linked with it innumerable enjoyments; and he makes the value of toil depend on it. Everything taught should be taught for an end or purpose; and this end or purpose should be well understood by the *pupil* as well as by the teacher; and he must be shown how to use his every faculty in conjunction with his teacher, in working out the object of his education; and to leave this to chance, or his own sagacity, is like sending a ship to sea without compass or helm.—To enable the scholar to master difficulties, he must be taught to master himself; to enable him to use his faculties, he must be taught command over them, and how to use and train each for its work. Yes, but how often are they so worked, so exercised as to produce weakness and dissipation instead of vigour and concentration of healthy effort, rendering them dull and dormant instead of sharp and acting? It is with the mind as with the body: some exercises weaken, not invigorate; some give health and life; others tend to generate weakness and disease, some sweeten life, others embitter it.—The considerate and skilful teacher, keeping these things in view, makes, therefore, this part of his duty the subject of *much reflexion, observation* and *inquiry*. And he who disregards this duty, gives evidence that education has received but little of *his* consideration. Let us not deceive ourselves on this subject. In giving growth to the human mind, there is exhibited one of the grandest marvels of creation, wisdom and power. How it developed itself is a marvel; how its powers gradually strengthen, and ripen to manhood, is a marvel; how it receives and retains impression is as marvellons; and how it acts is most mervellous. It is fearfully and wonderfully made. He who first breathed it into being,—and He only, understands it.—Rightly to educate, to train so marvellous a creation—is it not a most noble work—a work that demands the highest consideration and skill of the human intellect?

I hope again soon to return to the subject of Hints to my coworkers in this noble cause.

JOHN BRUCE.

ARITHMETIC.

(Continued.)

COMPOUND RULES.—In teaching arithmetic, we should first carry the pupils through a *simple* yet *comprehensive* course of calculations, embodying all, or nearly all, the fundamental operations of numbers, before we begin to carry them through a full systematic course of arithmetic,—to give them expertness and skill in the manipulations of numbers, and by suitable drilling make them comprehend processes and principles as much as possible.

Such exercises will greatly help to waken and invigorate their faculties—teach them how to reason out processes—how variously principles may be applied—and give them a knowledge of the properties of numbers and their numerical value. Arithmetic is the EUCLID of elementary schools. Every step of advance can be converted into a demonstrative science not beyond the reasoning powers of children, and which should be used as an expedient in training them. It is one of our best branches to foster self-development, self instruction—and train to voluntary effort. To these views of our subject I have all along directed special attention. We are now entering on another part of our subject—compound rules.

In teaching these and training pupils upon their various processes, I recommend that the drill and questions, should extend the training on the examples, to adding, subtracting, multiplying, dividing, and reducing denominations. Wherever arithmetic is taught with any pretensions to be the means of education, it must lay the foundation of these fundamental operations broad and deep, in a full intelligence of principles. The character of all the subsequent teaching depends so much upon the manner in which the elementary parts are taught, that too much attention can scarcely be paid to it.

The following examples will illustrate the method I recommend in teaching compound rules. To give as much facility as possible in reckoning, let the oral practice be continued simultaneously with the written; and at each step of advance let principles be well evolved.

1.—Dollars.

```
     27.16
     80.50
     75.14
  --------
    182.80
        12
  --------
12)2193.60
  --------
    182.80
     27.16
  --------
    155.64
     80.50
  --------
     75.14
     75.14
  --------
```

2.

£	s.	d.		£	s.	d.			
12	15	6½							
10	10	4							
22	0	0	=	22	0	0	=	21120	Reduced.
	25	0	=	1	5	0	=	1200	
		10½	=	0	0	10½	=	42	
23	5	10½	=	23	5	10½	=	22362	Additions.
		3				3		3	
3)69	17	7½	=	69	17	7½	=	67086	Products.
23	5	10½	=	23	5	10½	=	22362	Quotients.
22	0	0	=	22	0	0	=	21120	Subtractions.
1	5	10½	=	1	5	10½	=	1242	
1	5	0	=	1	5	0	=	1200	
0	0	10½	=	0	0	10½	=	42	
0	0	10½	=	0	0	10½	=	42	

3.—Troy Weight.

lbs.	ozs.	dwt.	gr.		lbs.	ozs.	dwt.	gr.			
37	5	15	20								
14	8	12	5								
9	10	8	10								
60	0	0	0	=	60	0	0	0	=	345600	Reductions.
	23	0	0	=	1	11	0	0	=	11040	
		35	2	=		1	15	0	=	840	
			35	=			1	11	=	35	
62	0	16	11	=	62	0	16	11	=	357515	Addings.
37	5	15	20	=	60	0	0	0	=	345600	Subtractings.
24	7	0	15	=	2	0	16	11	=	11915	
14	8	12	5	=	1	11	0	0	=	11840	
9	10	8	10	=		1	16	11	=	875	
9	10	8	10	=		1	15	0	=	840	
							1	11	=	35	
							1	11	=	35	

Multiplying, dividing and adding.

lbs.	ozs.	dwt.	gr.		lbs.	ozs.	dwt.	gr.		lbs.	ozs.	dwt.	gr.
37	5	15	20	× 3 =	112	5	7	12	÷ 3 =	37	5	15	20
14	8	12	5	× 3 =	44	1	16	15	÷ 3 =	14	8	12	5
9	10	8	10	× 3 =	29	7	5	6	÷ 3 =	9	10	8	10
62	0	16	11	× 3 =	186	2	9	9	÷ 3 =	62	6	16	11

The three preceding examples show the method of teaching I recommend in teaching the compound rules. They embrace the different compound processes. The whole working of each sum is by the same data; and results, when correct, prove operations. This is of great advantage to the pupil; for he proceeds in working under checks, which lead to correctness. To do justice to him, he must be questioned—drilled on every part of the working, till satisfactory answers are obtained, and facility in the operation is gained. And as you proceed with the training, show how the different results of the working, when correct, agree; and always, let your language and manner be pleasant and encouraging,—in character inviting.

Every part of the working of these sums is so plain that little explanation from me is necessary. For examples let the following one suffice:

4.—Lineal Measure.

	m.	fur.	per.	yd.	ft.	in.		m.	fur.	per.	yd.	ft.	in.	
	3	4	20	3	1	7								
	5	2	36	1	2	10								
Addings.	8	0	0	0	0	0	=	8	0	0	0	0	0	Reductions.
		6	0	0	0	0	=		6	0	0	0	0	
			56	0	0	0	=		1	16	0	0	0	
				4	0	0	=				4	0	0	
					3	0	=				1	0	0	
						17	=					1	5	
Subt.	8	7	16	5	1	5	=	8	7	16	5	1	5	Subt.
	5	2	36	1	2	10	=	5	2	36	1	2	10	
Mult.	3	4	20	3	1	7	=	3	4	20	3	1	7	Mult.
						5							5	
	5)17	6	23	0½	1	11	=	17	6	23	0½	1	11	Div.
	3	4	20	3	1	11	=	3	4	20	3	1	7	

Question on every part of the processes till the answers of pupils evince a clear knowledge of every part of the work.

With principles well illustrated, and with intelligent drilling a few examples will be sufficient to make them understand how to work the processes of compound numbers, and change denominations into each other.

With the written or slate work simultaneously practise much oral questioning. The result of slate work cannot reveal so much of the pupil's mind, the effects of your teaching upon it, nor the results of self-effort, or self-instruction as questioning. Intelligent questioning is the ploughshare of the mind. It turns up and turns out the results of teaching—how far teaching and questioning have set itself to work—and the effects of its own efforts.

JOHN BRUCE,
Inspector of Schools.

(To be continued.)

OFFICIAL NOTICES.



APPOINTMENTS.

EXAMINERS.

His Excellency the Governor General in Council was pleased, on the 25th July last, to appoint J. N. Bureau, F. X. Guillet, and C. B. Genest, Esquires, to be members of the Board of Examiners of Three Rivers.

SCHOOL COMMISSIONERS.

His Excellency the Governor General in Council was pleased, on the 17th July last, to approve of the following appointment of a School Commissioner:

County of Beauharnois.—St. Louis de Gonzagues: Mr. Jean Baptiste Laberge.

His Excellency the Governor General in Council was pleased, on the 11th instant, to make the following appointments of School Commissioners:

County of Quebec.—St. Gabriel Ouest: Rev. Messrs. David Shanks, David Kelly and Anthony Aaaron Von Iffland.

County of Megantic.—St. Pierre de Broughton: Messrs. Pierre Provençal and Joseph Gagné.

County of Rimouski.—Ste. Félicité : Messrs. Télesphore Gagné, Jean-Bte. Daigle, Jean-Baptiste Lebel, Joseph Boucher and Thomas Boulanger.

County of Levis.—St. Joseph de Lévis : Mr. Pierre Brunel, Jr.

County of Portneuf.—St. Raymond : Messrs. Ferdinand Savary, Isidore Déry, Prisque Drolet, George Price and Rev. John G. McArthur.

County of Dorchester.—Ste. Marguerite : Messrs. François Martineau, Pierre Carbonneau and Charles Provost.

County of Temiscouata.—Notre-Dame du Portage : Messrs. Bonaventure Boucher and Alexandre Lapointe.

County of Lotbinière.—St. Sylvester : Messrs. John Shields and Joseph Osburn.

TRUSTEES OF DISSENTIENT SCHOOLS.

County of Ottawa.—Aylmer : Messrs. Robert Ritchie, Charles Wright and John McLean.

ERECTIONS, &c., OF SCHOOL MUNICIPALITIES.

His Excellency the Governor General in Council was pleased, on the 13th instant,

To erect the following portion of territory into a School Municipality, under the name of *Ste. Félicité*, in the County of Rimouski, to wit : Twelve lots of the augmentation of the Seigniory of Matane, beginning at Lot No. 8, on the west, occupied by Jean-Baptiste Daigle, the augmentation of the Township of St. Denis, comprising 33 lots, and the augmentation of the Township of Cherbourg, from Lot No. 1 to Lot No. 30, on the east, occupied by Antoine Bélanger, at the place commonly called " James Hughes' stream," the whole having about four leagues frontage and a depth of two leagues.

His Excellency the Governor General in Council was pleased, on the 27th July last,

To detach from the School Municipality of Laterrière, in the County of Chicoutimi, the northern half of Lot No. 5 of the western range of the Township of Laterrière, Lots Nos. 6, 7 and 8 in the same range, and Lots Nos. 1, 2, 3 and 4 in the second range, and to annex the same to the School Municipality of Chicoutimi.

DIPLOMAS GRANTED BY THE NORMAL SCHOOLS.

Session of 1864-1865.

JACQUES CARTIER NORMAL SCHOOL.

For Academies.—Gualbert Gervais, Ovide Lamarche, Charles Ferland, Pierre Primeau, Paul Quesnel.

For Model schools.—Joseph Godin, Louis Verner, Virgile Harman, Antoine Primeau, Narcisse Bessette, Alexis Aubuchon, Alphonse Héroux, Achille Roberge.

For Elementary schools.—Joseph Richard, Napoléon Nolin, Hyacinthe Dostaler, Félix Lalonde.

LAVAL NORMAL SCHOOL.

For Model schools.—Jacob Gagné, Louis Dion, Louis Ouellet, Pierre Antoine Roy, Victor Alexis Bérubé, Jacques Richard, Elzéar Hubert Tremblay ; Vitaline Célanire Cosselin, Eutychiane Bernier, Marie Abbott, Marie Roy, Delvina Croteau and Anne Pritchard.

For Elementary schools.—Louis Alfred Blanchet, Michel Godefroi Bernard, Jean-Baptiste Delisle ; M. Marceline Lepage, M. Julie Anne Noël, Wilhelmine Couture, M. A. Joséphine Larose, Olympe Al. Fortin, Hermine Naud, M. A. P. Lumina McDonald, Marie A. Labonté, M. Malvina Vallières, M. E. Antoinette Routier, Mary Whelan and L. Eugénie Têtu.

DIPLOMAS GRANTED BY BOARDS OF EXAMINERS.

MONTREAL BOARD OF CATHOLIC EXAMINERS.

1st Class Elementary (*F.*)—Marie Euphrosine Aubertin, Valérie Aubin, Marie Elmire Barry, Zéphirine Baulnes, Onézime Bissonnette, Victoria Blanchard, Agnès Bonin, Marie Azilda Bonneville, Julie Bourgeau ; (*E.*) Bridget Brady ; (*F.*) Marie Cazildée Brazeau, Marie Alphonse Brodeur, Marie Anaïs Cardinal, Edesse Carrière, Elmire Cartier, Rose Anne Chabot, Flore Emma Chagnon, Adèline Coyteux, Olivier Desjardins, Elmire Dufresne, Marie Marguerite Dupuis ; (*E.*) Agnes Feeny ; (*F.*) Libère Eloïse Ferland, Julie Fournier ; (*E.*) Ellen Gilmore ; (*F.*) Marie Azilda Girouard, André Gougé, Malvina Gouzy, Herminie Grisé, Philomène Hébert, Eusèbe Hottin, Domitilde Jetté, Adèle Lahelle, Marie Louise Labossière, Pomméla Lalonde, Marie Délima Lambert, Marie Elisa Lamirande, Louise Marc-Aurèle, Philomène Angélie Marchessault, Emélie Michaud, Virginie Piédolu (Prairie), Marcille Poiriault ; (*E.*) Nino Kelly ; (*F.*) Lucie Renaud ; (*F. & E.*) Alexander Richardson ; (*F.*) Flavie Adelphine St. Michel, Julie Sylvestre, Earie Célina Tellier and Véronique Terrien.

2nd Class Elementary (*F.*)—Marie Olive Bouvier, Virginie Brodeur, Delphine Carrière, F. X. Desjardins, Mélina Cunégonde Giroux, Marie Délia Langelier, Madame J. L. Martin *née* Félicité Prud'homme ; (*E. & F.*) Catherine Milmore, Catherine Murphy, Rachel Portelance ; (*F.*) Philomène Moreau, Rose Préjean, Marie Louise Rainville, Azilda St. Denis, Marie Elmire Fétreau and Marie Odile Vézina.

August 1 & 2, 1865.

F. X. VALADE,
Secretary.

SHERBROOKE BOARD OF EXAMINERS.

1st Class Model school (*E.*)—Emeline L. E. Bottom.

1st Class Elementary school (*E.*)—Frederick A. Bowen, Anne Gill, Mary Jane Hall, Melissa Metcalf, Charlotte Selly.

2nd Class Elementary (*E.*)—Achsah Bishop, Lorain A. Bishop, Victoria Holbrooke.

Augt., 1865.

S. A. HURD,
Secretary.

PONTIAC BOARD OF EXAMINERS.

1st Class Elementary (*E.*)—Owen McKay.

2nd Class Elementary (*E.*)—Lorenia Carmichael, Dominick Cannon, Wm. Templeton Hewitt, Theresa M. Marcotte, Honora O'Brien.

June 6, 1865.

OVIDE LEBLANC,
Secretary.

BOARD OF EXAMINERS OF BONAVENTURE.

2nd Class Elementary (*E.*)—George William Aney, William McDonald

August 1, 1865.

CHARLES KELLEY,
Secretary.

BOARD OF EXAMINERS OF BEAUCE.

1st Class Elementary (*E. & F.*)—Mary Davidson ; (*F.*) Marie Célanire Garant.

2nd Class Elementary (*F.*)—Sara Emilie Lessard, Julie Joséphine Vallée, Marie Gagné, Marie Adèle Paradis, Eugénie Berthiaume, Victoire Maure, Lucie Vachon, Marie Célina Larochelle.

Augt., 1865.

J. T. P. PROULX,
Secretary.

BOARD OF EXAMINERS OF KAMOURASKA.

1st Class Elementary (*F.*)—Lucrèce Bérubé, Alphonsine Bérubé, Alvina Bossé, Emma Dancasse ; (*E. & F.*) Olympe Levasseur ; (*F.*) Philomène Ouellet.

2nd Class Elementary (*F.*)—Geneviève Bérubé, Mathilde Bouchard, Joseph Dubé, Fédérique Dumont, Emma Lapointe, Marie Lebel, Léontine McCarthy, Adéline McClure, Emérence Michaud, Amélie Morency.

August 1, 1865.

P. DUMAIS,
Secretary.

NOTICE TO SCHOOL COMMISSIONERS AND TRUSTEES

In pursuance of a Resolution adopted by the Council of Public Instruction for Lower Canada, on the 9th instant, and duly approved by His Excellency the Governor General in Council, notice is hereby given that from and after the 1st JULY, 1866, no Academy, Model School, nor Elementary School in Lower Canada, shall any longer be permitted to use other books than those approved by the said Council of Public Instruction, and that the Superintendent of Education shall be requested to refuse the grant to School Municipalities contravening this Rule.

Education Office, C. E.,
Montreal, May 31, 1865.

LOUIS GIARD,
Recording Clerk.

NOTICE TO SCHOOL COMMISSIONERS AND TRUSTEES.

School Commissioners and Trustees are requested to transmit to this Department, as in duty bound, the names of all persons elected by the Ratepayers for School purposes, whether they be elected during the month of July or at any other time. The information thus to be furnished being indispensable, the grant will be withheld from Municipalities not complying with this notice.

NOTICE TO TEACHERS.

Teachers' signatures affixed to Semi-Annual Reports should correspond with their first and family names as given by them to the Secretary of the Board of Examiners from which they obtained their diplomas, in order that those Municipalities in which they are employed may not experience any delay in receiving their allowances.

SITUATION WANTED.

An experienced teacher who is competent to teach Latin, Greek, English, the elements of the French language, and arithmetic, wishes to obtain a situation. He is 36 years of age, a Protestant and Scripture Reader. The highest testimonials can be produced. Apply at the Education Office.

JOURNAL OF EDUCATION.

MONTREAL (LOWER CANADA), AUGUST, 1865.

Death of Sir Etienne Paschal Taché.

The *Journal of Education* appears in mourning for the late Premier, the Honorable Sir Etienne Paschal Taché, who was also President of the Council of Public Instruction for Lower Canada.

Few have enjoyed a longer, happier or more brilliant career than has the distinguished man, who so lately, and for the second time, filled the highest place to which a Canadian can aspire.

Though far advanced in years, Sir Etienne displayed, until within a very short time before his death, the greatest vigor, both mental and physical. He presided over the last meeting of the Council of Public Instruction (held on the 9th May) and, up to the last moments of his life, public affairs engaged his attention. Apart from any title that he may have derived from his social and political position—apart from any right to represent the interests of the important district in which he resided, his claims to be heard in the Council of Public Instruction were manifold. When the first school laws were put into operation, his energetic conduct, persevered in at a temporary cost of popularity, and the determined efforts on his part which secured the triumph of education over ignorance and prejudice in the county he represented and those adjacent, must in our estimation, ever remain among the most meritorious actions of his public life. It is necessary to go back to those troubled times to appreciate fully the worth of the courageous men who contrived to put into practice our first municipal laws, and who instead of pandering to the prejudices of the people from motives of personal interest, risked their popularity and even their fortunes to obtain those liberal and progressive institutions which we now enjoy.

The Department of Education was represented at the funeral of Sir Etienne Taché by Dr. Giard, Secretary, and Mr. de Lusignan, deputed by the Superintendent, who was himself called away to attend a funeral elsewhere.

Books approved by the Council of Public Instruction for Lower Canada.

We must call the attention of our readers, and especially of teachers and managers of public schools, to an important official notice published in our last and in the present issue. As the use of unapproved books in schools of the different grades is not to be tolerated after the first of July 1866, it would be well that from the present, teachers should prepare themselves for the enforcement of this rule. With a view of aiding them in the matter, we have subjoined a classified list of the books approved. We have already explained that although the selection of books on the subject of religion or of morals is left by law to the Ministers of the several religious denominations inasmuch as books on other subjects are not unfrequently, and we might add are almost unavoidably, tinctured with the religious views of their authors, the Council has established a distinction in this respect. Books are approved either on the report of the Catholic or of the Protestant members of the Committee appointed for their selection, or on the report of the whole Committee. Teachers and parents are, in this manner, cautioned as to the religious tendency of the book approved, which is but fair.

The list is far from complete, many works being still under consideration; and until the delay above referred to shall have expired, the Council will, we believe, be happy to receive the suggestions of teachers and of those interested in education. Publishers and authors are already aware that an application for the approbation of a book must contain the name of the proprietor of the copyright and the price at which the work is sold per doz., and be accompanied with eight copies, that the members of the Committee may read it separately. The letters A, M, and E, stand for Academies, Model schools and Elementary schools.

I.

BOOKS APPROVED ON THE RECOMMENDATION OF THE WHOLE COMMITTEE.

English.

FIRST BOOK for the use of schools, published by J. Lovell. E.

THE FOUR SEASONS, being a new No. 3, Nelson's school series. E.

MURRAY'S Spelling Book. E.

WARD EXPOSITOR and Spelling Guide: a school manual exhibiting the spelling, pronunciation, meaning and derivation of all the important and peculiar words in the English language; with copious exercises for examination and dictation, by George Coutre, M. A. 1863. M.

THE BRITISH AMERICAN READER, by Borthwick. E.

ARITHMETIC of the Irish National series, published by John Lovell. E.

WALKINGHAM'S Arithmetic. E.

ELEMENTARY Arithmetic in decimal currency, designed for the use of Canadian Schools, by John Herbert Sangster. Second edition, carefully revised, 1861, published by John Lovell. E.

A COMPREHENSIVE SYSTEM of Book-Keeping by simple and double entry, by Thomas R. Johnson, accountant, Montreal, 1864. E. M.

THE PRINCIPLES of English Grammar, by W. Lennie, 1858. E.

ENGLISH WORD-BOOK for the use of schools; a manual exhibiting the structure and etymology of English words, by John Graham, 1863. A.

LOVELL'S GENERAL GEOGRAPHY, by J. G. Hodgins, Montreal, 1863. E. M. A.

HISTORY OF CANADA for the use of schools and families, by J. Roy, 7th edition, 1864. E. M.

MODERN SCHOOL GEOGRAPHY and Atlas, by James Campbell. E. M.

A SCHOOL HISTORY of Canada and of the other British North American Provinces, by G. J. Hodgins. M. A.

FIRST LESSONS in Scientific Agriculture for schools, by J. W. Dawson, LL. D., &c., Montreal, 1864. M. A.

ANSWERS to the programmes on agriculture and on the art of teaching, by Revd. J. Langevin, 2nd edition.

French Books.

ARITHMÉTIQUE de Bouthillier, publiée par MM. Crémazie. E.

COURS D'ARITHMÉTIQUE COMMERCIALE, imprimé chez Eusèbe Senécal, Montréal, 1863. M.

Cours de Tenue des Livres en partie double et en partie simple, imprimé chez Eusèbe Senécal, Montréal, 1863. M.
Abrégé de la géographie moderne, publié par la Société d'Education de Québec. E.
La Géographie Moderne de M. Holmes. M. A.
Abrégé de l'histoire du Canada de M. F. X. Garneau. E. M.
Grammaire de Lhomond, édition de Julien et les exercices sur la même. E.
La Série des Cours de grammaire de Julien et les exercices sur iceux. M.
Petit Traité de grammaire anglaise à l'usage des écoles primaires, par Charles Gosselin, Québec. E.
Manuel d'Anglais, grammaire et thèmes, par P. Saddler, Paris, 1839. E.
Manuel d'Anglais, thèmes et syntaxes, par le même, Paris, 1840. E.
Grammaire Pratique de la langue anglaise, par le même, Paris, 1848. M. A.
Manuel d'Anglais, deuxième, cinquième et sixième partie, par le même. M. A.
Exercices Anglais ou Cours de thèmes gradués, par le même. M. A.
Cours de Versions Anglaises, par le même. M. A.
Manuel Classique de conversations françaises et anglaises, par le même. M. A.
Nouveau Dictionnaire portatif anglais-français et français-anglais, par le même. M. A.
Précis Élémentaire d'histoire naturelle, par Zeller, Paris, 1858. M. A.
Traité d'Agriculture pratique, par J. F. Perrault, Montréal, 1858. E. M.
Dictionaire Classique de Bénard, édition de 1863. Paris.
Réponses aux programmes de Pédagogie et d'agriculture, par M. l'abbé Langevin, seconde édition.

Latin.

First Latin Reader for the use of schools, by A. H. Bryce, 4th edition, 1864. A.
Second Latin Reader with notes and a copious vocabulary, by A. H. Bryce, 1863. A.

Greek.

First Greek Reader for the use of schools, by A. H. Bryce, 1863. A.

II.

BOOKS APPROVED ON THE RECOMMENDATION OF THE ROMAN CATHOLIC MEMBERS OF THE COMMITTEE.

English.

The Duty of the Christian, published by the Brothers of the Christian Schools. E.
The Metropolitan Illustrated Speller, published by D. & J. Sadlier, New-York. E.
The Metropolitan Speller and pictorial definer, published by the same. E.
The Metropolitan first, second and third Readers, published by the same. E.
The Metropolitan Fourth Reader (Edition of 1865, for Canada). E. M.
Lingards' History of England abridged, for the use of schools. E. M.

French.

Le Devoir du Chrétien, publié par les Frères des Ecoles Chrétiennes. E.
Histoire Sainte par demandes et par réponses, suivie d'un abrégé de la vie de N. S. Jésus-Christ, à l'usage de la jeunesse. Québec, 1852, imprimée chez T. Cary. E.
Histoire Sainte de Drioux, publiée par E. Belin, Paris. E. M.
Histoire de France, par le même. E. M.
Histoire d'Angleterre, par le même. E. M.
Précis de Mythologie, par le même. M.
Histoire Ancienne, par le même. M.
Histoire Ecclésiastique, par le même. M.
Histoire du Moyen Age, par le même. M.
Histoire Moderne, par le même. M.

III.

BOOKS APPROVED ON THE RECOMMENDATION OF THE PROTESTANT MEMBERS OF THE COMMITTEE.

Pinnock's Goldsmith's Cathechism of the History of England. E.
Pinnock's improved edition of Goldsmith's History of England, by W. C. Taylor, LL.D. Montreal, Lovell, 1859. M. A.

Erratum.—In noticing Mr. Campbell's *Modern Geography and Atlas*, we were in error in supposing that the maps had been prepared in New York; they were executed by Messrs. Phillips & Son, of Liverpool, England, a well known firm.

Distribution of Prizes and Diplomas at the Normal Schools. (1)

The distribution of honors and rewards to the female teacher-pupils of the Laval Normal School took place on the 1st July, the Hon. the Superintendent of Education in the chair. Among those who had assembled to witness the interesting ceremony were the Hon. Mr. Langevin, Solicitor General, East, Rev. Mr. Cazeau, G. V., Messrs. Bardy and Juneau, Inspectors of Schools, several members of the clergy and many gentlemen who take an interest in the advancement of Education.

The examination in geography, the History of England, mythology, and composition, though but partial, was sufficient to show how severe were the tests to which the pupils are put before they can obtain the diploma. The maps and the historical and genealogical charts exhibited, and also drawn on the blackboard during the examination, attested the skill of the scholars, as did also the pastel and chalk drawings which graced the walls of the hall; while the wonderful proficiency attained in the art of letter writing fairly took the auditory by surprise. These exercises were diversified with instrumental and vocal music, and the recitation of poetry, in which difficult art Miss Picard, the daughter of an Indian Chief of Lorette, and the Misses Roy and Croteau greatly distinguished themselves. Throughout the examination the pupils maintained an excellent bearing, and combined with an unaffected manner and faultless pronunciation, great tact and ability. Miss Gosselin pronounced the valedictory address.

The Superintendent of Education said, in the course of his remarks, that the different authorities concurring in the maintenance and direction of the school should be thankful for the special blessings with which their efforts had been rewarded.

In the seven years during which the school had been open he had not, he said, received a complaint against any of the teachers who had been trained in it and who were now dispersed over the country; and this was the more remarkable, added he, because a disposition to find fault with teachers existed in many localities.

After a few closing remarks by Rev. Mr. Cazeau, G. V., the national anthem was sung, and the ceremony ended. The number of diplomas granted was, for model schools 6, for elementary schools 12.

The examination of the male teacher pupils took place on the 3rd, at the Normal School, when the Solicitor General, the Mayor of Quebec and many of the citizens were present.

After an address by Professor Thibault, which formed a prominent feature in the proceedings, the pupils were examined in French grammar, natural philosophy (with experiments), recitations in English and French, singing, and composition. Mr. Jacob Gagné delivered a valedictory address, and the Superintendent of Education tendered to the graduates the customary advice and recommendations. The number of diplomas awarded was, for model schools 7, and for elementary schools 3.

The session at the Jacques-Cartier Normal School did not close until the 17th July, when the prizes and honors were awarded in presence of Rev. Mr. Dowd and C. S. Cherrier Esq., members of the Council of Public Instruction, Hon. A. A. Dorion, M. P. P., Rev. Mr. Villeneuve, Rev. Mr. Dagenais, Superior of the College of St. Therese, Rev. Mr. Lamarche, and a large and highly respectable auditory.

Professor Delaney having opened the proceedings with a lecture on compared philology and the origin of language, the distribution of prizes awarded to the pupils of the annexed model school then took place. The exercises were enlivened by several musical performances under the direction of Professor Brauneis. The number of diplomas awarded was, for academies 5, model schools 8, and for elementary schools 4.

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(1) For a full report of the proceedings at the McGill Normal School, see our last.

The Hon. Superintendent delivered a short address and was followed by Mr. Cherrier, who ably sketched the measures which were still wanting to complete our system of elementary education, insisting particularly on the urgent necessity of protecting teachers effectually against the too frequent changes to which they were exposed, and also against reductions in their salaries. He strongly urged upon his hearers the necessity of establishing a depository for books, maps and other objects required in the schools, as had been done in Upper Canada. The depository for parish libraries, said the speaker, had greatly aided in making the progress of education certain in the other section of the Province, while in Lower Canada a great part of the money and administrative labor expended on our system of public instruction failed in securing the desired object through the want of means to develop the instruction imparted in the school. Mr. Cherrier then congratulated those interested in the Normal Schools on the zeal which had been displayed by the Principals of these institutions, Rev. Mr. Verreau and Rev. Mr. Langevin, who had successfully performed a work of inconceivable difficulty and one requiring unremitting labor. He alluded, in conclusion, to the excellent treatise on the Art of Teaching, published by the Rev. Mr. Langevin; and recommended it not only to teachers, but also to parents and guardians and every one who took an interest in education. Mr. Cherrier was frequently applauded during his remarks, which were very apposite and eminently practical.

Convocation of the Laval University and Exhibitions at the Colleges and other Institutions of Learning in Lower-Canada. (1)

The convocation of the Laval University and the distribution of prizes to the pupils of the Seminary of Quebec took place on the 10th July, in the great hall of the University. A numerous and select auditory had assembled to witness the ceremony. The Rev. Mr. Méthot, Senior Professor in Arts, pronounced an oration eulogizing the merits of his predecessor, the late Rev. Abbé Ferland, Professor of History, and Mr. Langis, a graduate, delivered a valedictory address. The degrees of Licentiate and M. D. were successively conferred on Mr. Hébert, this being the first time, we believe, that the last has been awarded on examination at this University, all its doctors having received their degrees *honoris causâ*.

The exhibition at the *Montreal College*, the oldest in the country after the Seminary of Quebec, took place on the 4th of July. A crowd of spectators thronged the hall of the museum, which had been handsomely decorated for the occasion. As usual the programme consisted of recitations, dialogues, music, experiments in chemistry and natural philosophy, and a valedictory—spoken by Mr. Deschamps. The superior of the St. Sulpicians, who presided, closed the exercises with an address, remarkable alike for its eloquence and the sage counsels which it inculcated.

At the college of Ste Thérèse, the examination was conducted in the presence of a large assembly, among whom were the Hon. Mr. Dumouchel, Dr. Meilleur, late Superintendent of Education, many clergymen and several members of Parliament. After the exercises, the Principal announced, in the course of the closing address, that a commercial course, entirely distinct from the classics, would be opened next year.

Three very interesting exhibitions were given under the auspices of St. Mary's College, Montreal, at which debates, theatricals, music and the usual distribution of honors and rewards engaged the attention of the invited guests.

The exhibition at the college of St. Hyacinthe was held on the 11th July. Hon. Judge Sicotte, the Superintendent of Education and many members of the clergy, were present. After the exercises had been gone through and the prizes awarded, the Principal, Rev. Mr. Raymond, G. V., and Hon. Mr. Chauveau delivered short addresses. In the course of his remarks the latter, referring to the portraits of the founder and of several benefactors of the college, among which was that of Lord Elgin, said that it was a noble thing thus to foster gratitude and he hoped the feeling implanted in the breasts of the pupils would be acted upon through life, and that it would be to them a powerful motive. Speaking of Lord Elgin, he added that when that excellent governor returned from a visit to this college, he had expressed his surprise at the existence of so fine and so complete an institution near Montreal, where there were so many of importance.

The college grounds have recently been improved and embellished, and now offer a very pleasing appearance. The library, museum and laboratory have also received considerable additions.

(1) For the McGill and Bishop's College Universities, see our last.

The closing of the college of l'Assomption for vacation witnessed a touching ceremony, the occasion being the death of the founder, Rev. Mr. Labelle, which had occurred during the session.

Very successful exhibitions were also held at the colleges of Nicolet, Three Rivers, Ste Anne-la-Pocatière, Terrebonne, St. Michel, Joliette, &c., the public manifesting more interest than ever in these annual displays of academic skill.

The ladies' schools directed by the various religious orders, held their usual examinations, which were very brilliant and satisfactory. At the oldest of these institutions, in Quebec, the prizes were presented by the Rev. Mr. Cazeau, G. V., who presided. Among the auditory, which was numerous and select, were the Consul General of France and many dignitaries and civil functionaries. The valedictory address was spoken by Miss Stuart. The ladies' boarding-school of Notre-Dame-des-Anges, conducted by the Augustine Nuns of the General Hospital, near Quebec, had a very successful exhibition which, besides an interesting examination on the history of the convent, (also one of the oldest institutions in the country) included exercises in literature, botany, ancient history, astronomy and music. Miss Gaudry delivered the valedictory address.

The various boarding-schools of the Ladies of the *Congregation* at Montreal, Quebec, and in other parts of the country, also held their customary examinations. Of these institutions there are at Montreal the large boarding-school known as Villa-Maria, that of Mont Ste. Marie, a half boarding-school, and the day-school or St. Denis Academy. At Villa-Maria the examination was presided over by Rev. Mr. Lenoir, Principal of the Montreal College, and attended by the Superintendent of Education, Hon. Messrs. Alleyn and Dorion, and a great number of distinguished persons from all parts of the country and from the United States. Misses Eliza Chauveau, Dorion, McDougall, Nellis, Kimber, Walsh and Connolly were awarded gold medals. The drawings, paintings, needlework, embroidery, rug-work, pastry and specimens of culinary art were much admired. The valedictory was pronounced by Miss Dorion.

Reports of the examinations at the boarding-schools of the Sisters of St. Ann, Lachine, of the Sisters of Jesus and Mary, Point Levis, and at a host of other schools of the same class in all parts of this section of the Province, have for some time past teemed in the press. We have not space, however, further to particularize these interesting proceedings, and can only mention one or two institutions which present new features of interest; the first is under the direction of the Clerks of St. Viator, at Côteau St. Louis, and is a school for the deaf and dumb; the second, under the care of the Sisters of Charity, is an institution for the blind. The exercises in grammar, geography, arithmetic, &c., showed how successful had been the endeavors to impart instruction to these unfortunates, notwithstanding the formidable obstacles to be surmounted.

The schools of the Brothers, at Montreal, Quebec and Three Rivers, held their usual examinations, at which, in the first mentioned city, the bands formed by the pupils discoursed enlivening music.

The examination at the large school recently erected in Griffintown by the Seminary of Montreal, was well attended. Rev. M. Granet, Superior of the Seminary (who presided), the Superintendent of Education, Mr. O'Dougherty and Rev Mr. O'Brien delivered addresses. The French classes were examined at the *Cabinet de Lecture Paroissial*, at St. James School, and at the large school in St. Mary's Suburb, Rev. Messrs. Granet and Truteau, the Hon. the Superintendent of Education, Dr. Meilleur and Messrs. Cherrier and Rodier being among those who delivered addresses. These schools afford instruction to nearly 4000 children in Montreal, and are almost exclusively supported by the Seminary of this city.

Twenty-fifth Meeting of the Teachers' Association in connection with Laval Normal School.

The first sitting of this Convention was held on the 26th May, 1865. After some preliminary proceedings had been disposed of, Mr. Juneau, Inspector of Schools, read a paper on *Education*, and Mr. N. Thibault a paper on the *History of Geography*.

The second and last sitting was held on the following day, attended by Rev. J. Langevin, Priest, Principal; Messrs. P. M. Bardy and F. E. Juneau, School Inspectors; Messrs. N. Thibault, F. X. Toussaint, J. B. Cloutier, N. Lacasse, D. J. L. Lafrance, Jos. Létourneau, C. Dion, D. McSweeney, J. B. Dugal, Ed. Carrier, J. Lapointe, M. Ahern, C. Gagné, C. Bouchard, Frs. Ferland, P. Giroux, Frs. Parent, M. Ryan, G. Gawin, H. Huot, Ls. Lefebvre, Ths. Tremblay, S. Côté, N. Mercier, E. St. Hilaire, G. Labonté, F. Fortin, Frs. Pagé, H. Rousseau, F. X. Gilbert, P. Drolet, Chs. Huot, X. Gravel, and the teacher-pupils of the Normal School.

A discussion took place touching the Council and the Department

of Public Instruction, the inspection of schools, the Savings Fund, and teachers' salaries, resulting in the adoption of a series of resolutions, in which it is declared that, in the opinion of the association, it is much to be desired that the normal schools, the school inspectors and the teachers be represented in the Council of Public Instruction; and that teachers be, as far as possible, appointed to the several places in the Education Office, so as to make of these so many objects of emulation calculated to retain teachers in their callings; that the Superintendent of Education be requested to recommend only teachers having several years' experience for appointment as school inspectors; that the inspectors in their official reports indicate the methods of instruction employed by each teacher; that the inspectors meet at least once a year so as to have an opportunity of adopting uniform methods of instruction and of making them accord with the methods recommended and followed in the normal schools; that this association renew its petition to the Legislature for the purpose of obtaining that the annual appropriation made in favor of the Savings Fund be doubled, so that the *maximum* allowed by the law may be secured to the superannuated, infirm or incapacitated teachers; that in order to ensure regularity in the payment of teachers' salaries this association shall call the attention of inspectors to the importance of seeing that the accounts of Secretary-Treasurers be examined in detail; that a clause be added to the law fixing the time for vacation from the 1st of August to the 15th of September; that it should not be lawful for the school commissioners to delay their contracts with fresh teachers beyond the usual time allowed for vacation without liability to pay the latter from the 1st of July preceding.

A vote of thanks was then tendered to Messrs. Bardy and Juneau for having, agreeably to the request of the association, transmitted to its Secretary, lists of the teachers employed in the districts assigned to the above named inspectors.

The Rev. Principal Langevin and Messrs. P. M. Bardy, N. Lacasse and J. B. Cloutier promised to prepare papers or lectures for next meeting.

Teaching Geography was the subject selected by the Principal for discussion at the next meeting, to be held on the last Friday in August.

Notices of Books and Recent Publications.

LEMOINE.— Maple Leaves. Third series. Canadian History and Quebec Scenery; By J. M. LeMoine, Esq. 137 p. Quebec, 1865.—Hunter, Rose & Co.

The gifted author of *Les Oiseaux du Canada* is pushing on with commendable zeal and industry an undertaking that, as its chief object seems to make the English population better acquainted with our early history, deserves our good wishes. The third series is illustrated by no less than 19 photographic views by Livernois, of the delightful country seats around Quebec, by two plans of the siege of Quebec copied from the very rare work of Jeffries, and by a plan of Crane Island and the adjacent *battures*.

The *Maple Leaves* ought to be found on the drawing room table of every amateur of Canadian history and literature. We copy an article on Mr. de La Corne which will well repay perusal.

ATKINSON.—Classical and Scientific Studies, and the great Schools of England; By W. P. Atkinson. 117 p, 8o. Cambridge.—Sever and Francis. 1865.

This is a lecture read before the Society of Arts of the Massachusetts Institute of Technology. It is in a great measure a pungent analysis of a startling Report published in England on the great schools of Eton, Rugby, Winchester and others serving as preparatory schools to the Universities. Physical science, according to that report, is altogether and avowedly ignored in these schools; the teaching of the modern languages is but a sham; the English language is but indirectly improved, and while everything seems subordinate to Latin, Greek and mathematics, the latter are but inefficiently mastered by the pupils, very few of whom besides turn out to be first-rate Greek or Latin scholars. By the epigraph: *Mutato nomine de te fabula narratur*, one can see what the author is driving at.

He maintains that the friends of scientific culture have left an undue advantage to their opponents by allowing these the full benefit of the maxim that the object of education must be the training of the mind; while they might have shown that the mind could be trained just as well by the study of science as by that of the dead languages. Although the author does not show himself free from religious and national prejudices, he seems to be a man of extensive reading, and he handles his subject with no inconsiderable ability and vigour of style.

SADLIER.— Catholic Anecdotes—from the French, by Mrs. E. Sadlier. 236 p. in-18o. New-York.—D. & J. Sadlier.

This compilation of historical and religious anecdotes from the most popular French books on the subject, is made with Mrs. Sadlier's usual talent and industry. It is so made as to follow the Apostles' creed, the anecdotes being methodically classed under the headings of each article successively.

DAWSON.—St. Vincent of Paul.—A lecture delivered by the Rev. Æn. McD. Dawson before the St. Vincent of Paul Society of the Cathedral Parish of Ottawa.

The subject is of vast interest to men of all religious denominations as well as to mere philanthropists. It is treated with the author's well known talent.

QUEEN'S University and College, Kingston. Calendar; session 1865-66, and examination papers, 1864-65.

It appears by the announcements contained in this pamphlet, that the University, besides the usual course, has a department of civil engineering and surveying. The additions to the Library during the year by donations amount to over 1000 volumes, of which 480 were obtained by bequest from the late Principal Leitch and 310 from the late Mrs. McGill of Montreal.

ANNUAIRE *de l'Université Laval pour l'année académique* 1865-66. Côté et Cie., Québec.—44-xvi.

It appears by the Calendar that the number of pupils during the year 1864-65 were: in the Faculty of Law, 26; in the Faculty of Medicine, 41; in the College or *Petit Séminaire* and in the Faculty of Arts 394; in the *Grand Séminaire* or School of Theology, 40; in all 511. To these are to be added 180 pupils in the College of Notre-Dame de Lévis, which is now under the management of the University. There are besides other colleges affiliated.

CALENDAR of the McGill University, session 1865-66.—Examination papers for 1864-65.

This Calendar is the same as usual. Morrin and St. Francis Colleges are affiliated in so far as degrees in Arts are concerned. The Faculty of Law of Morrin College has also been recognised by the University.

FRASER.—Extract from a Manuscript Journal relating to the Siege of Quebec in 1759, kept by Colonel Malcolm Fraser. 37 p. Quebec, 1865.—*Mercury office.*

Col. M. Fraser died in 1815, at the age of 82. The original of this manuscript is in the possession of the family of the late Hon. J. M. Fraser, who allowed a copy to be made from it for the use of the Literary and Historical Society of Quebec, under whose auspices it is now published. We understand the edition is very limited and would therefore advise *amateurs* to procure a copy as soon as possible.

CASGRAIN.—*Un Contemporain—A. E. Aubry, par l'Abbé H. R. Casgrain.* 104 p. in-18o. Quebec.—Desbarats.

Dr. Aubry, who has been during nearly ten years a Professor of Roman Law in the Laval University, and during four years, editor of the *Courrier du Canada*, left for Europe on the 24th June last. An address, signed by the authorities of the University, the clergy and numerous friends, was presented to him, and Mr. Casgrain has just published a short notice of his career, accompanied by a good *carte de visite* and an autograph, the whole in the best Parisian style. Mr. Aubry is a self-made man; he was born in July 1819 at Tuffé, *département de la Sarthe*, and was the twelfth child of an old soldier who had served in the wars of the Republic. How Mr. Aubry acquired some knowledge, how he came to Paris with *one franc* in his pocket and worked his way through life, is a most amusing and instructive story, and another example of what industry, perseverance and good conduct will achieve under adverse circumstances.

TRANSACTIONS of the Literary and Historical Society of Quebec, session 1864-65. New series, part 3rd, 8vo., 156 p. Quebec.—Hunter, Rose & Co.

De omnibus rebus et quibusdam aliis, or perhaps more appropriately *Nil humani alienum à me puto*, ought to be the motto of the Quebec Literary and Historical Society. It would be difficult to imagine a greater variety of subjects than is to be found in this and the preceding numbers.

We have here "Coleoptera" and "Military drill," the Sleswig-Holstein question" and "the lost Island of Atlantis," "the Ancient Scandinavians" and "Copper mining in Canada East," besides two papers on magnetic Declination in Canada East, and an opening address by the President, John Langton, Esq., M. A., who has selected educa-

tion for his subject. We must not forget to mention also a disquisition on two mummies from Thebes. What next? In his essay, Mr. Langton treated the same question as to the relative advantage of classical or scientific studies in the training of the mind, that we have alluded to above in noticing Mr. Atkinson's lecture. We shall give extracts in our next.

Taylor.—Portraits of British Canadians.—The second and third parts of this work contain biographies and photographs of Sir Fenwick Williams, the late Sir Etienne Taché, the late George Moffatt and Wm. Morris, the late Jean Jacques Lartigue, first R. C. Bishop of Montreal, Rev. Dr. Mathieson, the Hon. Messrs. Cartier, Sanfield McDonald and Ferrier, and Principal Dawson.

There is no attempt at classification or system in the publication. The dead and the living, the native and the European, the soldier and the priest, are launched *pêle-mêle* on the highway to posterity. Although defective in some respects, this mode is not by any means unattractive; the style — of which we gave a specimen in our last number — continues elegant and pleasing, perhaps sometimes a shade too *recherché*.

MONTHLY SUMMARY.

NECROLOGICAL INTELLIGENCE.

— Sir Etienne Paschal Taché, the late Premier, was born at St. Thomas on the 5th September, 1795. At the commencement of the war in 1812, he entered the 5th Battalion of embodied militia as ensign, and was soon afterwards promoted to a lieutenancy in the *Chasseurs Canadiens*. He was present with this corps at several engagements, at one of which—the battle of Plattsburg—his company lost eighteen men. While the war still continued, he had turned his attention to the study of surgery in the camps, and on the return of peace he adopted medicine as his profession, and settled at St. Thomas, where he married Mlle Sophie Morency and had fifteen children, of whom six only survive. In 1837, being a partizan of Mr. Papineau, he was suspected of complicity in the insurrection which then took place, but although his domicile was searched, no proofs were found against him. Immediately after the union of the Canadas, Mr. Taché was elected a representative for the County of l'Islet, and from that time until he accepted the office of Deputy Adjutant General of Militia in 1846, he acted with the Baldwin-Lafontaine party. In Parliament he advocated municipal government and public instruction, incurring without hesitation a certain degree of unpopularity in his county, where he had to struggle against those who were opposed to all local taxation. He held the office of Deputy Adjutant General of Militia until 1848, when he resigned it to join the Lafontaine-Baldwin Cabinet as Commissioner of Public Works, taking his seat in the Legislative Council at the same time. He also formed part of the Hincks-Morin and of the MacNab-Morin Ministry. On the resignation of Mr. Morin in 1855, it was to Mr. Taché that the task of forming the Lower Canadian section of the new Ministry was confided. In the following year, Sir Allan MacNab having retired, he formed the Taché-McDonald Cabinet. In the autumn of 1857, he withdrew, but gave his support to the McDonald-Cartier Administration. In 1858, he was called to England and received the order of knighthood; in 1860, he was made a Colonel in the army and appointed Aide-de-camp to Her Majesty; he was elected President of the Council of Public Instruction and, in 1862, received the order of St. Gregory from the Sovereign Pontiff; at the time of the "Trent affair" he was appointed on the commission charged with the duty of preparing a bill for the reorganisationof the militia. During the crisis which marked the fall of the Sanfield McDonald-Dorion Ministry in 1864, Sir Etienne Taché was applied to by both parties, but having refused to enter into a coalition with the Lower Canadian opposition, he consented to form, with the conservatives, the second Taché-McDonald Ministry, in which he discharged the duties of Receiver General and Minister of Militia. He presided at the Convention for the confederation of the Provinces held in 1864.

Sir Etienne Taché was undeniably the architect of his own fortune. But partially educated in his youth, it is to his natural abilities and studious habits, to his energy and the happy combination of rare qualities in his character, that he was indebted for success. In the Legislative Council, where he was charged with the duty of explaining and defending the measures of the Government, he was often called upon to speak in a language which was not his own, and in this difficult position, though unable to display his oratorical powers, he always acquitted himself of his task with success.

He died at the age of seventy, and leaves two sons and several daughters. A lecture on Physical Education, from his pen, will shortly be reprinted in the *Journal de l'Instruction Publique.*

—It is with pain that we have to record the death of the Hon. Mr. Justice Morin, which occurred on the 27th July, at St. Adèle, county of Terrebonne.

Augustin Norbert Morin was born on the 12th October, 1803, at St. Michel de Bellechasse, and had therefore attained his 62nd year when he died. Born of an honest and pious family who cultivated the soil, he gave at an early age, unmistakable signs of talent and of a happy disposition.

Having completed his studies at the Seminary of Quebec, where he won many honors, he hesitated for a time between the church and the bar, but finally decided in favor of the latter. He studied law under the late Hon. D. B. Viger, and was admitted to practice in 1828. Three years before, he had published a *Letter* in pamphlet form addressed to Mr. Justice Bowen and defending the use of the French language in the courts of Justice. He also founded the *Minerve* newspaper about this time, and was its first editor. In 1830 he was elected a member of Parliament for the County of Bellechasse. Four years later, he, together with the Hon. L. J. Papineau, drafted the manifest known as the 92 Resolutions, and was delegated to England with an address founded thereon and exposing the grievances of Lower Canada. His mission failed, however, and he returned to Canada with Mr. Viger, determined upon resistance. A schism having taken place in the ranks of the liberal party in 1836, Mr. Morin went to Quebec to marshal those who still adhered to Mr. Papineau. In the following year, on the dispersion of the insurgents, he was forced to fly, but after remaining in concealment a few months he delivered himself up and demanded a trial, which request it was not, however, thought necessary to grant, and subsequently having been set at liberty, he was among the first representatives returned to Parliament after the Union. He was soon afterwards made a Judge of the Circuit Court, but resigned this office in the following year to enter the Baldwin-Lafontaine Cabinet as Commissioner of Crown Lands. In the elections which followed the resignation of that Ministry, he had the honor of being returned simultaneously for two counties, and on the opening of Parliament in 1841 was the opposition candidate for the Speakership of the House of Assembly. Resisting every offer that was made to detach him from his party, he steadily declined to essay the formation of a coalition. On the success of Messrs. Lafontaine and Baldwin in 1848, he was elected Speaker of the Legislative Assembly, which position he held up to 1851, when the Hinks-Morin Ministry came into existence. In this cabinet Mr. Morin was, at first, Provincial Secretary and afterwards Commissioner of Crown Lands. Having, in 1854, lost his election in Terrebonne, he was immediately returned for the County of Chicoutimi, but the Cabinet of which he formed part was soon compelled to resign, having encountered two adverse votes. In forming a new ministry Sir Allan MacNab at once applied to Mr. Morin, who acceding to his request, became a member of the coalition,—a position he resigned in the month of January following, to accept of a Judgeship in the Superior Court. Four years later he was appointed on the commission for the codification of the laws,—a great work, presenting formidable difficulties and involving immense labor, which he lived to see completed.

— The late Hon. Georges René Saveuse de Beaujeu, whose funeral took place on the same day as that of the late Premier, was born in 1810. The death of the late Count de Beaujeu a few years ago in France had left him heir to the title. Mr. de Beaujeu was appointed Legislative Councillor in 1848. Well read in Canadian history, he had long been engaged in making researches into historical and genealogical subjects, and was one of the most active members of the Historical Society of Montreal, having collected a great number of valuable works and documents bearing on American history. He died at the age of 55, and leaves a wife and several children to mourn his loss.

— Mrs. Sigourney is dead. She died at 10 o'clock this morning, June 10, after a lingering decay. We believe there was no particular disease, aside from the failing powers of old age. She grew very thin, and wasted away. Her death, like her life and character, was marked by a quiet peace and a clear Christian trust. Lydia Huntley Sigourney was born at Norwich on the 1st of September, 1781, and was, consequently, in her seventy-fourth year. During the quarter of a century ending, perhaps somewhere about 1850, her name was more widely known in either hemisphere than that of any other American authoress. Latterly her poetry has given place in most libraries to that of a more modern and varied school, though it will never be wholly superseded. She was early addicted to verse making, possessed a temperament which, while it never marred her sound and solid health, was, nevertheless, keenly susceptible to the varied beauties and subtle influences of nature. She removed to this city in 1814, where she opened a select school for young ladies, and where her poetical talent and many lady-like and Christian graces soon attracted the notice and engaged the personal interest of the late Daniel Wadsworth, a gentleman whose artistic and literary taste was fortunately equalled by his pecuniary means; and he was the means of introducing her to the public, in a volume of "Moral Pieces in Prose and Verse." In 1819 Miss Huntley became the second wife of Charles Sigourney, a well-known merchant of this city; and since that time she, while engaged in the domestic cares of rearing a family of children, found time to contribute largely to the serious literature of the country, both in prose and verse. Her published works, in all, number nearly fifty volumes. Her prose is marked by vigor, beauty, and good sense, and, like her poetry, is full of

good moral precepts. Her poetry belongs to a past school, in which we look for such names as those of Dr. Beattie, Hannah Moore, Mrs. Barbauld, Dr. Watts, and perhaps we may add, without injustice, the more eminent one of Goldsmith. She has been called the 'Hemans of America,' and in some respects the designation was not amiss; her poetry in some particulars was not much unlike that of Mrs. Hemans, though more subtle, and perhaps less imaginative. Some of her poems are by no means destitute of imagination; but their main characteristic is their religious and preceptive spirit, blended with the evidences of the influence on the writer of natural objects and beauties.—*New York Paper.*

— Mr. Charles Waterton, the Naturalist—or, as he was more familiarly called in the neighbourhood of the place where he passed the last years of his life, Squire Waterton—the well-known naturalist and traveller, died at his residence, Walton Hall, near Wakefield. Although he had reached an advanced age—namely, eighty-three—yet he was hale and vigorous beyond the common lot of those of his time of life. On the day before he died he fell from a rustic bridge spanning a small stream. Dr. Wright and Mr. Horsfall were called in to him. The shock which the system had sustained was too great for him to rally from. The Rev. Canon Brown, before the death, administered to him the last rites of the Roman Catholic Church, and it is understood the Pope telegraphed his benediction. Mr. Edmund Waterton, the squire's son, was in Rome with the Pope when the accident took place. The instructions which the departed squire left behind him concerning his burial are somewhat remarkable. A mausoleum for the reception of his body has long been erected near the top end of the lake. This sepulchre rests beneath the overhanging branches of two venerable oak trees. The body was not carried to the tomb by land, but across the lake in a boat: the mourners following in the wake in other boats. The squire had written his own epitaph. It is in Latin. The translation runs thus: — "Pray for the soul of Charles Waterton, born June, 1782, died 18—, whose wearied bones rest here."—*Exchange Paper.*

LITERARY INTELLIGENCE

— At the sittings of the *Société Historique* of Montreal held on the 26th and 31st of July, Mr. J. U. Beaudry presented a collection of Parliamentary documents, several letters from emigrants in the colony of Kânkakee, a "Glance at the Victoria Bridge and the Men who built it," and a copy of the Census of 1861. He also submitted a *Mémoire sur quelques cours de droit*, and read some genealogical notices by the late Sir Louis Lafontaine, the patron of the society. Rev. Mr. Verreau communicated a fragment of the original journal kept by M. St. Luc de Lacorne after the wreck of the French vessel l'*Auguste*. The rev. gentleman submitted certain explanatory notes, which are to accompany the publication of the manuscripts of Sanguinet and Badeaux on the war with the "*Bastonnais*" in 1775, now in the press; he also presented *l'Histoire des Petites Ecoles de Montréal.* Hon. Mr. Chauveau presented the *Journal de l'Instruction Publique* for 1864, and the pamphlet on the Indian languages, by Mr. O. N., in answer to Mr. E. Renan. Mr. R. Bellemare presented, on behalf of Robert Forsyth Esq., a leaden plate found under the foundation walls of the old Court House of Montreal, situated at the upper end of what is now called Jacques Cartier Square. The inscription on this plate indicates the years 1622 and 1742 as the dates at which the Jesuits settled in this place. He also presented documents on the capture of Fort Necessity, the imprisonment of the hostages, Stobo and Vambraam, and their examination before the tribunals of Montreal. These documents contain a plan of Fort Duquesne.

The President having announced the death of two of the most active and zealous members of the society, namely, Sir Etienne Taché, the Premier, and the Hon. G. R. Saveuse, Count de Beaujeu, member of the Legislative Council, a resolution was adopted expressing the profound regret felt by this society for the loss of these distinguished members, and of its sense of respect for the memory of men who had placed at the service of the country their personal knowledge and experience, as also the numerous and important documents which they held in their possession; and further requesting the secretary to transmit a copy of the resolution, together with an address of condolence, to Lady Taché and Mme de Beaujeu.

— There is to-day a slight lull in the criticism on the "History of Julius Cæsar." Society has almost exhausted its ideas on the preface, and is now eagerly awaiting the appearance of the work itself. The following list of crowned heads who have, like Napoleon III, also appeared before the world as authors, is published in the Paris papers: Charlemagne wrote a book against the doctrine of Felix d'Urgel, and one on the question of the worship of images; the Emperor Frederick II was the author of a treatise on hunting; Maximilian I wrote the genealogies of several illustrious men; Charles V wrote a treatise on art, and an account of his reign; Chilperic celebrated the dogma of the Trinity in verse; Alfred the Great composed hymns; Marguerito d'Orleans, Queen of Navarre, wrote the "Marguerite des Marguerites" and the "Contes de la Reine de Navarre;" Queen of Elizbeth of England translated "Sallust" and "Sophocles;" Mary Stuart read at Louvre a Latin discourse of her own composition, and also wrote poetry; Charles IX, wrote a poem on Hunting; Marguerite de Valois left behind her poems and memoirs; Henry IV translated "Cæsar's Commentaries;" a portion of the same work was translated and published by Louis XIV; Henry VIII of England obtained his title of "Defender of the Faith" for his treatise against Luther; James I wrote several controversial works, and his famous treatise against tobacco; Peter the Great composed treatise on naval subjects; the Emperor of China Hoam-Ti, who built the great wall, wrote several works; Louis XVIII composed anonymously comedies and tables; Napoleon I made some valuable annotations on the "Commentaries of Cæsar;" and Napoleon III, is the author of works on artillery and pauperism in France. Now he has produced his *magnum opus.* The evening papers devote most of their spare space—that is, most of their paper—to the subject of "Julius Cæsar;" and Mr. Alexandre Dumas, *père*, is to lecture on the same subject to-morrow. There used to be a saying, "dead as Julius Cæsar," but the Emperor has brought him to life again and spoiled the proverb.—*Paris correspondent London Telegraph.*

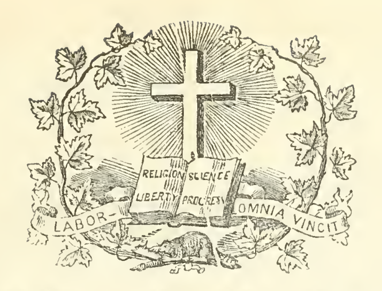
STATISTICAL INTELLIGENCE.

— For some time past we have been in search of statistics by which our readers could see the real progress which Canada and her rival, the American Union, are making in wealth and population. The official publication of the last census of the United States supplies the want. From the *Globe*, we gather full extracts from it, which we can compare with results of our advancement, and so strike the balance between the progress of the rivals. First, then we learn that the census tables show that the population of Upper Canada is increasing at a far greater rate than the population of the United States. In 1850 the population of the United States and Territories was 23,191,876. In 1860 it numbered 31,433,922—an increase of 38.58 per cent in ten years. In January, 1852, the population of Upper Canada numbered 952,004. In January, 1862, it increased to 1,456,681—an increase of 53.01 per cent In other words, says the *Globe*—"while the United States have added, in ten years, in round numbers, thirty-five persons to every hundred of her population, Upper Canada has added fifty-three to every hundred of hers."

So much for Upper Canada. The comparison does not, of course, hold so well as regards Lower Canada; but even there the States have not so much to boast of. In 1852 the population of Lower Canada was 800,-261. In 1862 it may be stated to have been 1,138,430—an increase in ten years of 27,88 per cent, against the 35.50 per centage increase of the United States. But taking the increase of Upper and Lower Canada together the increase of the States, for the two periods of ten years mentioned, we find that the increase in population in Canada has been five per cent. greater than that in the States! This is a great result, considering the gigantic efforts made by the States to monopolise the emigration of the world. These figures, it will be seen, are so far at fault, that they compare the progress of the States from 1850 to 1860 against the progress of Canada from 1852 to 1862. But, then, it must be borne in mind that the emigration to Canada in the few years preceding 1850 was very small, while the emigration to the United States for the few years preceding 1862 was large—a state of things which renders total increased rate of population on the part of Canada all the more remarkable.

A further comparison of statistics reveals the fact that Lower Canada, slow as she is, has in ten years increased her population at a greater rate than any single State in the Union, during a like period of ten years, with, we believe, one exception, Illinois.—And with regard to Upper Canada, the result is still more satisfactory. To make a single comparison—Upper Canada, in ten years, increased her population from 952,004 to 1,456,680 an increase of 53,01 per cent. New York during a like period increased its population from 3,097,494 to 3,880,735—an increase of only 25.29 per cent! Compared to the increase for ten years of the whole group of Western States, including Illinois, Michigan, Indiana, Ohio, Wisconsin, Minnesota, Iowa, Missouri, Kentucky, Kansas and the territory of Nebraska, the rate of increase in Upper Canada, for a like period, falls off. In 1850 the population of those States was 6,386,000. In 1860 it was 10,147,663—or an increase of 60.47 per cent; while, as we said before, the decimal increase of Upper Canada is 53.01 per cent. But manifestly the proper way to estimate the progress we are making is to compare the whole of the United States, Territories and all, with the whole of Canada, and according to this comparison, as has been already shown, Canada has increased her population, in ten years, five per cent. greater than the United States. These figures are satisfactory so far. They show that, despite the assertions of the annexationists, Canada is increasing in population—and population in the western world means wealth—at a greater rate than the States. They also indicate a bright future for the country, when emigration developed by the government to its fullest extent, and when, as we hope will be the case, the fertile prairies of the North West are thrown open to Canada and old country settlers.—*London Prototype.*

EUSÈBE SENÉCAL, *Caloric Printing Presses*, 10, *St. Vincent Street, Montreal*



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LITERATURE.

POETRY.

THE CHILDREN'S HOUR.

Between the dark and the daylight,
  When the night is beginning to lower,
Comes a pause in the day's occupations,
  That is known as the Children's Hour.

I hear in the chamber above me
  The patter of little feet,
The sound of a door that is opened,
  And voices soft and sweet.

From my study I see in the lamplight,
  Descending the broad hall stair,
Grave Alice, and laughing Allegra,
  And Edith with golden hair.

A whisper, and then a silence;
  Yet I know by their merry eyes
They are plotting and planning together
  To take me by surprise.

A sudden rush from the stairway,
  A sudden raid from the hall!
By three doors left unguarded
  They enter my castle wall!

They climb up into my turret
  O'er the arms and back of my chair;
If I try to escape, they surround me;
  They seem to be everywhere.

They almost devour me with kisses,
  Their arms about me entwine,
Till I think of the Bishop of Bingen
  In his Mouse-Tower on the Rhine!

Do you think, O blue-eyed banditti,
  Because you have scaled the wall,
Such an old moustache as I am
  Is not a match for you all?

I have you fast in my fortress,
  And will not let you depart,
But put you down into the dungeon
  In the round-tower of my heart.

And there will I keep you forever,
  Yes, forever and a day,
Till the walls shall crumble to ruin,
  And moulder in dust away!

LONGFELLOW.

THE MAGPIE.

" Once in an ancient city, whose name I no longer remember,
Raised aloft on a column, a brazen statue of Justice
Stood in the public square, upholding the scales in its left hand,
And in its right a sword, as an emblem that justice presided
Over the laws of the land, and the hearts and homes of the people.
Even the birds had built their nests in the scales of the balance,
Having no fear of the sword that flashed in the sunshine above them.
But in the course of time the laws of the land were corrupted;
Might took the place of right, and the weak were oppressed, and the mighty
Ruled with an iron rod. Then it chanced in a nobleman's palace
That a necklace of pearls was lost, and ere long a suspicion
Fell on an orphan girl who lived as maid in the household.
She, after form of trial condemned to die on the scaffold,
Patiently met her doom at the foot of the statue of Justice.
As to her Father in heaven her innocent spirit ascended,
Lo! o'er the city a tempest rose; and the bolts of the thunder
Smote the statue of bronze, and hurled in wrath from its left hand
Down on the pavement below the clattering scales of the balance,
And in the hollow thereof was found the nest of a magpie,
Into whose clay-built walls the necklace of pearls was inwoven."

LONGFELLOW.
Evangeline.

SCIENCE.

North Polar Exploration.

BY CLEMENTS R. MARKHAM.

(Concluded.)

The vital question now arises—what is the width and condition of this pack? Parry, in 1827, ascertained that it was at least 192 miles broad, by walking over it, and at his extreme northern point in 82° 45', a strong ice blink was seen on the northern horizon. This was in the end of July. We may, therefore, take its average width at that time of the year to be about 250 miles. It is hoped that an expedition may enter the pack between Spitzbergen and Nova Zembla towards the end of July, under favourable circumstances, notwithstanding the failure of all former attempts. This hope is based on the great advantage that steamers have over sailing vessels, and on the presumed action of the Gulf-stream in melting and loosening the pack. All then depends on the time that it will take for vessels to force their way through it. (1) Let us see upon what grounds we may calculate the probable length of this detention. The width of the Polar pack in the end of July is not less than 250 miles; that of the middle pack in Baffin's Bay is generally about 172. Now the average detention in Baffin's Bay, calculating from the time taken by the six expeditions, assisted by steam power (for we may now leave sailing vessels out of the question), has been twenty-two days. But by holding on to the land ice very little ground is ever lost in Baffin's Bay, and the existence of the land floe makes eventual success almost a certainty; while between Spitzbergen and Nova Zembla there is a drifting pack with no land ice to assist navigation, and progress is dependent on the chance of lanes opening in the right direction. With extraordinary luck, however, steamers might bore their way through this 250 miles of pack in forty days, and reach open water beyond, towards the end of August. If an attempt is made to take the pack earlier in the year, it will of course be found to be much wider and closer, and the detention will be proportionably longer. Under fortunate circumstances, steamers may, perhaps, get through the pack in August, so as to have about a fortnight left for North Polar exploration in the supposed open water to the northward, before the young ice begins to form. It must be remembered that dense fogs prevail in summer wherever there is a large surface of open water, in the Arctic regions. If a navigable sea exists, however, some interesting discoveries may be made in its hydrography and fauna, and a series of useful magnetic observations may be taken. But the generally admitted absence of land (2) on that meridian precludes the idea of wintering in safety, and destroys all chance of obtaining many of the important scientific results which have been enumerated as attainable from North Polar exploration, when undertaken in the right direction. The objections to the Spitzbergen route are that the chances are against a successful passage through the Polar pack; that, even should this obstacle be overcome, there would be so little of the navigable season left that scarcely anything would be done; and that none of the objects of North Polar exploration would be attained in the event of failure, very few in the less probable event of success; while if the vessels are prevented from returning before the winter sets in, they will be in extreme peril. (1)

We now come to the consideration of the Smith Sound route. This route is recommended by a great weight of authority—by Sir George Back, the Nestor of Arctic exploration; by Admiral Wrangell, (2) the discoverer of the northern shores of Siberia; by Admiral Collinson; by Sir Leopold M'Clintock, the highest living Arctic authority; by Sherard Osborn, whose admirable paper first brought North Polar exploration into notice; by Vesey Hamilton, whose Arctic experience is only second to that of M'Clintock; and by Captain Maury, the great American hydrographer.

Smith Sound is ascertained to be a broad strait leading into the unknown Polar region, and its shores are the most northern known land in the world. They are, therefore, the best point of departure whence sledge parties may push onwards over the Polar region, and the best wintering station for vessels forming a scientific expedition. It is proposed that two well-fortified gunboats, of 60-horse power, should proceed up Baffin's Bay to Smith Sound; that one should winter near Cape Isabella, at its entrance, and that the other should go further north, so as to winter at a distance of about 300 miles from her consort. There is no doubt about vessels being able to reach the entrance of Smith Sound, at the head of Baffin's Bay, every summer. The ice drifting from the seas, whose portals are Smith, Jones, and Lancaster Sounds, forms what is called the *middle pack* during the summer, stretching across the centre of Baffin's Bay; while the head of the bay, upon which the above sounds open, is always free of ice in the summer, and is called the "*North Water.*" The *middle pack* is about 170 miles wide, and the reason why it may always be passed, while the Polar pack cannot, is that on the eastern side of Baffin's Bay there is an identation called Melville Bay, filled with ice firmly attached to the land, and known as the *land floe*. Vessels make fast to this *land floe*, while the middle pack drifts past, and thus creep up through a lane of water which is occasionally left between the fixed and drifting ice, sooner or later reaching the "*North Water.*" Out of thirty-eight exploring vessels that have gone up Baffin's Bay since its discovery in 1616, not one has been lost, and not one has failed to reach the "*North Water,*" when the necessary conditions of success have been observed—namely, arrival at the edge of the ice early in the season, and sticking to the land floe. Two only (3) out of thirty-eight have failed, and neither adhered to these conditions. The whalers do not persevere in the attempt, unless they can pass through early in the season; yet, in twenty-seven out of thirty-two years, from 1817 to 1849, they succeeded in reaching the "*North Water.*" In 1849 a whaler reached the

(1) The analogy which has been attempted to be drawn between the pack in the Southern hemisphere, through which Sir James Ross forced his way (*Southern Seas*, ii. p. 183), and the Polar pack, between Spitzbergen and Nova Zembla, is entirely delusive. On December 18th, 1841, Sir James entered the pack, in latitude 60° 50' S., and, after being beset in it for fifty-six days, at last emerged into open water on February 2nd. This pack was 800 miles wide. On the 24th he was obliged to relinquish all further exploration, on account of the formation of young ice, which threatened to freeze the ships up for the winter in a most dangerous position, but fortunately they were saved by a strong breeze (ii. p. 203). Thus he only had three weeks of navigable season left, after getting through the pack. This pack in the Southern hemisphere was met with in the temperate zone, after having drifted through hundreds of miles in a boundless ocean, and become loose and broken. The North Polar pack, on the contrary, is but a short distance from the place of its formation, and is in a confined sea surrounded on all sides by continents.

(2) Some of the advocates of the Spitzbergen route speculate on the existence of land; but the whole argument in favour of that route is based on its supposed absence. This supposition is founded on the absence of icebergs and of any mud or débris on the ice, of which the Polar pack is composed. The argument is perfectly sound so far as it goes.

(1) Open lanes and water-holes, no doubt, exist throughout the winter in the Polar region, caused by currents, and the ice is thus kept in occasional motion by gales of wind. It is this condition of the ice which would cause the extreme danger of wintering in the Polar pack north of 80°, at a distance from any land. The ships would be kept in motion, and perhaps dashed about amongst heaving blocks of ice in a gale of wind, at a time of year when the incessant night and the intense cold render navigation out of the question. The men would find it impossible to work aloft, and the running rigging would be frozen too hard to reeve through the blocks.

(2) See *Royal Geographical Society's Journal*, vol. xviii, p. 19 (1848).

(3) One of these was the "North Star," in 1849. She took the pack and was drifted across the Melville Bay, not getting clear of the ice until the navigable season was over. She started very late in the summer. In the very same year a whaler (the "St. Andrew") reached the "*North Water*" on June 12th, a clear proof that if the "North Star" had started early, she would have got through successfully.

"*North Water*" by the 12th of June, and in the years 1825, 28, 32, 33, and 34, the whole fleet of whalers got through early in July. It must be remembered that the whalers do not persevere after the middle of July, while there will be time for a discovery ship to reach Smith Sound, even if she does not get through, before the end of August. It may be counted upon with certainty that two screw-steamers of 60-horse power will get through the *middle pack* (on an average) in about twenty-two days, if they start early in the season, and that they will reach the "*North Water.*" The "*North Water*" means Smith Sound, for it always extends to the entrance of that great opening whence Captain Inglefield in 1852 saw open water to the northern horizon, stretching through seven points of the compass.

The two gun-boats would winter about 300 miles apart, one near Cape Isabella and the other near Cape Parry, both on the weather or western side of Smith Sound. The march to explore the Polar region would commence in February, along the coast which stretches to the northward. The ice is always firm, and fit for travelling near the shore, from February to May; and this circumstance led Wrangell to advocate the Smith Sound route, for he well knew that his *Polynias*, or open lanes of water, were not encountered until he advanced a considerable distance from the coast. The distance from Cape Parry to the Pole and back is under 1000 miles; so that a party going to the North Pole, and travelling at the rate of about ten miles a day, would be back by the middle of May. Mr. Arrowsmith places Cape Parry in 81° 56' N., or 484 miles from the Pole; and Dr. Kane's steward saw land stretching away to the north as far as the eye could reach. Give us only 184 miles of land north of Cape Parry, and a sledge journey to the Pole is a matter of calculation (1) if performed during the winter and early spring. The discovery of the North Pole by this route does not depend upon a drifting, treacherous pack, upon the opening or closing of leads through the ice in the right direction, or upon a theoretical Polar basin, as is the case in Spitzbergen seas. By the Smith Sound route the discovery is a certainty, so far as human calculation can make it so. Sir Leopold M'Clintock has brought the art of sledge travelling to such perfection, that this may be affirmed with perfect truth. Much has been said, by objectors to this route, about the impossibility of dragging heavy boats over the ice. All who are acquainted with M'Clintock's system of travelling, know well that such an idea would never enter his head. He would probably supply each sledge with a very light India-rubber boat, and narrow lanes of water would never stop him. If he arrived on the shores of a great navigable ocean in an Arctic winter, then, of course, his progress would be arrested. But, at the same time, a marvelous discovery will have been made, and his researches will be turned in other directions, leading to results of equal value and interest. The northern side of the Greenland continent will be carefully examined, as well as all the land to the westward. We may rely upon it that immense results will be insured by the exertions of scientific explorers wintering for two seasons in Smith Sound, that every branch of science will be enriched by their labours, and that, even if success is denied them in their endeavours to reach the Pole, their achievements in other directions will repay the expenses of the expedition a thousand-fold.

The advantages of the two routes will not bear comparison. The Spitzbergen route offers, in the event of success, a chance of reaching the Pole, and the opportunity of exploring the supposed Polar basin; but everything must be done very hastily, and therefore inefficiently, during the brief navigable season. In the probable event of failure the vessels will have accomplished nothing. They will have been a month or two struggling in the pack, and will at last be drifted out again, either whole or in pieces.

The Smith Sound route, on the other hand, offers the discovery of the North Pole, of the northern side of Greenland, of the land to the westward, and all the numerous results in every branch of science, which are expected from a North Polar expedition. Moreover, the explorations will be made by sledges, and therefore carefully and thoroughly. In the event of failure in securing the main object, all the other results will be attained; so that, under any circumstances, good and useful work will be done.

By the Spitzbergen route there is the bare chance of doing little, by the Smith Sound route there is the certainty of doing much.

Three objections have been raised to another Arctic expedition: first, that it will be no use; secondly, that it will be dangerous; and thirdly, that it will be expensive. After what has been said of the great and beneficial results, both direct and collateral, which may be expected from North Polar exploration, it is unnecessary to dwell upon the first objection. There are many people who, with the *Times*, are altogether incapable of comprehending that there can be anything worth doing, which does not promise good interest on outlay, in hard cash; and to speak to them of advantages other than an actual money profit on goods delivered, would be a mere waste of breath. Yet even they might be reminded of the actual commercial profit that has been derived from Arctic Expeditions. The voyages of Willoughby and Chancellor opened the rich trade with Archangel. The discoveries of Hudson led to the lucrative Spitzbergen whale fishery, those of Davis and Ross to the equally remunerative fisheries in Davis' Strait and Baffin's Bay. The discoveries of the Danes in Greenland have yielded supplies in ivory, cryolite, and graphite. The Russian and Arctic expeditions have opened a rich trade in fossil ivory. Lastly, the voyages up Barrow's Straits have resulted in an extensive series of magnetic observations of practical utility to navigation.

But the public have a right to inquire closely whether any future expedition would incur even the remote possibility of such a fate as befel the "Erebus" and "Terror," and to this objection a satisfactory reply may properly be demanded. There is no analogy whatever between the ill-fated expedition led by Franklin, and that which, it is hoped, will be despatched to Smith Sound for North Polar exploration. No one feels this more strongly than the noble-minded widow of that great explorer. In the latter case, a vessel will be stationed at a point whence annual communication with England is easy and certain, and whence a retreat to the Danish settlements in Greenland is perfectly devoid of all risk; while Franklin was sent into an unknown region, without a thought of providing for his safe retreat in the event of disaster. Had one of Franklin's ships remained off Cape Warrender, at the entrance of Lancaster Sound, and the other not gone beyond Cape Riley, they would have been quite as safe as if they had never left Greenhithe. The Smith Sound exploring vessels, stationed at Cape Isabella and Cape Parry, will be in exactly similar positions, for Smith Sound, like Lancaster Sound, opens on the "North Water" of Baffin's Bay. It is not, however, to be supposed that there will be no individual danger to those who gallantly come forward to serve in a Polar expedition of discovery. On the contrary, it will be a service requiring great powers of endurance, courage, and self-reliance of a high order, and indomitable resolution. But it is the desire to overcome difficulties and dangers, and to emulate the deeds of former naval worthies, which induces men to volunteer for such service. Suffice it to say that the climate is the healthiest in the world, and that a retreat from Smith Sound to the Danish settlement of Upernavik in summer, if it should become necessary, is easy, and free from danger.

The objection on the score of expense will doubtless be raised with more sincerity, at least, than is this unworthy attempt to discourage naval voyages of discovery on the ground of danger. But if the despatch of a scientific expedition, the results of which

(1) A sledge party, commanded by M'Clintock, has walked 1220 miles in 105 days; on another occasion, 1330 miles. Mecham did 1203 miles, Richards 1093, Osborn the same. Allen Young 1150, and Hamilton 1150. Sir Leopold M'Clintock says that a single sledge may carry sixty days' provisions, and go over 600 miles of ground, without assistance from depôts.

will be shown to be important by the leaders of science, is to be refused owing to the trifling expenditure it will occasion, let us be told so at once; and let not those who would advocate any iniquitous war with China or Japan, in pursuit of the main chance, protest against the imaginary risk of a scientific expedition. M'Clintock's voyage, and he was absent two years and a half, cost £8400. Parry's attempt to reach the Pole cost £9900. The actual expense of a Polar expedition up Smith Sound, consisting of two of those numerous 60-horse power gunboats which are now lying idle, or being sold to be broken up, would not exceed £30,000. Now if the solution of the greatest geographical problem that remains to be solved, and the attainment of those scientific results which have already been enumerated, are not considered worth the expenditure of so trifling a sum—an expenditure which would be richly and abundantly repaid—the character of the English people must be strangely altered. Certain it is that our forefathers would have held that such a sum appropriated for such an end was money well spent; and there is good reason for the belief that if the subject receives full and fair consideration, the public opinion of the country will now approve the despatch of a North Polar expedition. During the last ten years the sum of £150,000,000 has been spent upon the navy, out of which only a 230th part has gone to the scientific department of the profession. Surely it is not much to ask that this infinitesimal proportion should be imperceptibly augmented, in order that an important and valuable service may be performed!

An expedition for North Polar discovery, by way of Smith Sound, will yield most useful scientific results, will add largely to the sum of human knowledge, while it will run no risk of a catastrophe such as that which befel the crews of the "Erebus" and "Terror." For these reasons it deserves such cordial support from the public opinion of the country as will induce the Government to undertake it. When it is remembered how beneficial are the indirect advantages invariably derived from voyages of discovery, and how important it is that naval officers should have some nobler career opened to them, in times of peace, than the ceaseless round of holystoning decks and cleaning brass work, an interest will be felt in these voyages, even by men who do not personally appreciate their scientific results. The same entreprise, courage, endurance, and presence of mind are required to conduct an Arctic expedition as to face an enemy in the field; but in the former case those qualities are exercised in advancing civilization, extending knowledge, and exciting friendly sympathy and interest throughout the world; in the latter, they are wasted in the deplorable operations of war.—*Intellectual Observer.*

Leaves from Gosse's Romance of Natural History.

THE RECLUSE.

There are regions where the presence of man is a thing so totally out of experience, that the wild animals manifest no sort of dread of him when he does by accident intrude on their solitude. In the Galapagos Islands, perhaps the most singular land in the world, all the animals appear quite devoid of the fear of man. Cowley, in 1684, observed that the doves there "were so tame that they would often alight on our hats and arms, so as that we could take them alive." Darwin saw a boy sitting by a well with a switch, with which he killed the doves and finches as they came to drink. He had already obtained a heap of them for his dinner, and he said he had been constantly in the habit of doing this. The naturalist himself says that a mocking-bird alighted on the edge of a pitcher which he held in his hand, and began quietly to sip the water;—that a gun is superfluous, for with the muzzle he actually pushed a hawk off the branch of a tree: in fact, all the birds of the islands will allow themselves to be killed with a switch, or even to be caught in a hat.

Other naturalists have noticed the extreme tamenesss of many kinds of birds at the Falkland Islands; where, though they take precautions against the attacks of foxes, they appear to have no dread of man. Formerly they were more confiding than at present. When the Isle of Bourbon was discovered, all the birds, except the flamingo and goose, were so tame that they could be caught with the hand; and on the lone islet of Tristan d'Acunha in the Atlantic, the only two land-birds, a thrush and a bunting, were so tame as to suffer themselves to be caught with a hand-net. I have myself had large and beautiful butterflies come and suck at flowers in my hand, in the forest-glades of North America.

Cowper has finely used this phenomenon to heighten the desolation of a solitary island, when he makes Selkirk, on Juan Fernandez, complain,—

> "The beasts that roam over the plain,
> My form with indifference see;
> They are so unacquainted with man,
> Their tameness is shocking to me."

But these facts are only local and partial exceptions to a general rule. They can in nowise be allowed to set aside the prevalence of that pristine law, by which God covenanted to implant a terror of man in all the inferior creatures, even those which are far stronger than he. "And the fear of you and the dread of you shall be upon every beast of the earth, and upon every fowl of the air, upon all that moveth upon the earth, and upon all the fishes of the sea." Often have I seen, and marked with wonder, the excessive vigilance and jealousy with which fishes watch the least approach of man. Often have I stood on a rock in Jamaica, and seen the little shoals come playing and nibbling at my feet, apparently all unconscious of the monster that was watching them; but the least movement of the hand towards them was sufficient to send them like arrows in all directions. And how often have I been tantalised by the excessive prudence of some fine butterfly that I eagerly desired to capture, when, day after day, I might see the species numerous enough at a particular part of the forest, and by no means shy of being seen, playing in the air, and alighting continually on the leaves of the trees, and continuing there, opening and closing their beauteous wings in the sun, and rubbing them together with the most fearless unconcern, though I walked to and fro with upturned face below,—*yet invariably taking care to keep themselves just out of the reach of my net!*

This power of judging of actual danger, and the free-and-easy boldness which results from it, are by no means uncommon. Many birds seem to have a most correct notion of a gun's range, and, while scrupulously careful to keep beyond it, confine their care to this caution, though the most obvious resource would be to fly quite away out of sight and hearing, which they do not choose to do. And they sometimes appear to make even an ostentatious use of their power, fairly putting their wit and cleverness in antagonism to that of man, for the benefit of their fellows. I lately read an account, by a naturalist in Brazil, of an expedition he made to one of the islands of the Amazon to shoot spoonbills, ibises, and other of the magnificent grallatorial birds, which were most abundant there. His design was completely baffled, however, by a wretched little sandpiper, that preceded him, continually uttering its tell-tale cry, which at once aroused all the birds within hearing. Throughout the day did this individual bird continue its self-imposed duty of sentinel to others, effectually preventing the approach of the fowler to the game, and yet managing to keep out of the reach of his gun.

There is, however, in some animals, a tendency to seek safety in an entire avoidance of the presence of man; a jealons shyness which cannot bear to be even looked at, and which prompts the creature to haunt the most recluse and solitary places. This disposition invests them with a poetic interest. The loneliness of the situations which they choose for their retreats has in itself a charm, and the rarity with which we can obtain a glimpse of them in their solitudes makes the sight proportionally gratifying when we can obtain it.

The golden eagle seeks for its eyrie, the peak of some inaccessible rock, far from the haunts of man, whose domain it shuns. Here it forms its platform-nest, rearing its young in awful silence and solitude, unbroken even by the presence of bird or beast; for these it jealously drives from its neighbourhood. The bald eagle of North America achieves the same end by selecting the precipices of cataracts for its abode. Lewis and Clarke have described the picturesque locality of the nest of a pair of these birds amidst the grand scenery of the Falls of the Missouri. Just below the upper fall there is a little islet in the midst of the boiling river, well covered with wood. Here, on a lofty cotton-wood tree, a pair of bald eagles had built their nest, the undisputed lords of the spot, to contest whose dominion neither man nor beast would venture across the gulf which surrounds it, the awfulness of their throne being further defended by the encircling mists which perpetually arise from the falls.

Our own wild-duck or mallard is a shy bird, avoiding the haunts of

man, and resorting to the reedy margins of some lonely lake, or broad reach of a river. The summer-duck of America has similar habits, but more delights in woods. I have often been charmed, when standing by the edge of some darkling stream, bordered with lofty trees that so overhang the water as nearly to meet, leaving only a narrow line of sky above the centre of the river, with the sight of the coy summer-duck. When the western sky is burning with golden flame, and its gleam, reflected from the middle of "the dark, the silent stream," throws into blacker shadow the placid margins, then, from out of the indistinct obscurity, a whirring of wings is heard, and the little duck shoots plashing along the surface into the centre, leaving a long V-shaped wake behind her, till, rising into the air, she sails away on rapid pinion till the eye loses her in the sunset glow.

On other occasions we trace the same bird far up in the solitudes of the sky, breaking into view out of the objectless expanse, and presently disappearing in the same blank. We wonder whence it came; whither it is going. Bryant's beautiful stanzas, though well known, will bear repetition here :—

TO A WATER-FOWL.

Whither, 'midst falling dew,
While glow the heavens with the last steps of day,
Far through their rosy depths, dost thou pursue
Thy solitary way ?

Vainly the fowler's eye
Might mark thy distant flight to do thee wrong,
As, darkly painted on the crimson sky,
Thy figure floats along.

Seek'st thou the plashy brink
Of weedy lake, or marge of river wide,
Or where the rocking billows rise and sink
On the chafed ocean side ?

There is a Power whose care
Teaches thy way along that pathless coast,—
The desert and illimitable air,—
Lone wandering, but not lost.

All day thy wings have fann'd,
At that far height, the cold, thin atmosphere,
Yet stoop not, weary, to the welcome land,
Though the dark night is near.

And soon that toil shall end.
Soon shalt thou find a summer home, and rest,
And scream among thy fellows; reeds shall bend,
Soon, o'er thy shelter'd nest.

Thou'rt gone, the abyss of heaven
Hath swallow'd up thy form; yet, on my heart,
Deeply hath sunk the lesson thou hast given,
And shall not soon depart.

He who, from zone to zone,
Guides through the boundless sky thy certain flight,
In the long way that I must tread alone,
Will lead my steps aright.

The ostrich is remarkably shy and wary. A native of wide sandy plains, its stature enables it to command a wide horizon, while its great fleetness makes the chase a most severe exercise. "When she lifteth herself on high, she scorneth the horse and his rider." The rheas, which are the representatives of the ostrich in South America, inhabit regions presenting many of the characteristics of the African plains, and have much the same habits. They are extraordinarily vigilant, and so swift of foot, that it is only by surrounding them from various quarters, and thus confusing the birds, who know not whither to run, that the Gauchos are able to entangle them with the bolas or weighted cord. Mr. Darwin says that the bird takes alarm at the approach of man, when he is so far off as to be unable to discern the bird.

Ancient writers mention a species of ox as inhabiting the forests of Europe, which they call the urus. It is described as being of a most savage and untameable disposition, delighting in the most wild and recluse parts of the forest, of vast size and power. It is generally believed that this race is preserved in some semi-wild oxen of a pure white colour, which inhabit one or two extensive woodland parks in the northern parts of our own island. It is interesting to observe the effect which the presence of man produces upon these animals. On the appearance of any person, the herd sets off at full gallop, and, at the distance of two or three hundred yards, they make a wheel round, and come boldly up again, tossing their heads in a menacing manner; on a sudden they make a full stop, at the distance of forty or fifty yards, looking wildly at the object of their surprise; but, upon the least motion being made, they all again turn round and fly off with equal speed, but not to the same distance; forming a shorter circle, and again returning with a bolder and more threatening aspect than before, they approach much nearer, probably within thirty yards, when they make another stand, and again fly off; this they do several times, shortening their distance, and advancing nearer, till they come within ten yards; when most people think it prudent to leave them, not choosing to provoke them further; for there is little doubt but, in two or three turns more, they would make an attack.

The cows and calves partake of this jealous seclusion. When the former bring forth, it is in some sequestered thicket, where the calf is carefully concealed until it is able to accompany its dam, who, till that time, visits it regularly twice or thrice a day. Should accident bring a person near the secret place, the calf immediately claps its head upon the ground, and seeks concealment by lying close like a hare in its form. A hidden calf of only two days old, on being disturbed, manifested its inborn wildness in a remarkable manner. On the stranger stroking its head, it sprang to its feet, though very lean and very weak, pawed two or three times like an old bull, bellowed very loud, stepped back a few paces, and bolted at his legs with all its force; it then began to paw again, bellowed, stepped back and bolted as before. The observer, however, now knowing its intention, stepped aside, so that it missed its aim and fell, when it was so very weak that it could not rise, though it made several efforts to do so. But it had done enough; the whole herd had taken the alarm, and, coming to its rescue, obliged the intruder to retire.

In the forests of Lithuania there yet linger a few herds of another enormous ox, which at one time roamed over the whole of Europe, including even the British Isles—the European bison. The great marshy forest of Bialowicza, in which it dwells, is believed to be the only example of genuine primeval or purely natural forest yet remaining in Europe, and the habits of the noble ox are in accordance with the prestige of his ancient domain.

A few years ago the Czar of Russia presented a pair of half-grown animals of this species to the Zoological Society of London; and a very interesting memoir on their capture, by M. Dolmatoff, was published in their *Proceedings*. A few extracts from that paper will illustrate the seclusion of their haunts and manner. "The day was magnificent, the sky serene, there was not a breath of wind, and nothing interrupted that calm of nature which was so imposing under the majestic dome of the primitive forest. Three hundred trackers, supported by fifty hunters, had surrounded, in profound silence, the solitary valley where the herd of bisons were found. Myself, accompanied by thirty other hunters, the most resolute and skilful, had penetrated in Indian file the circle, advancing with the utmost precaution, and almost fearing to breathe. Arrived at the margin of the valley, a most interesting spectacle met our eyes. The herd of bisons were lying down on the slope of a hill, ruminating in the most perfect security, while the calves frolicked around the herd, amusing themselves by attacking one another, striking the ground with their agile feet, and making the earth fly into the air; then they would rush towards their respective dams, rub against them, lick them, and return to their play. But at the first blast of the horn the picture changed in the twinkling of an eye. The herd, as if touched with a magic wand, bounded to their feet, and seemed to concentrate all their faculties in two senses, those of sight and hearing. The calves pressed timidly against their mothers. Then, while the forest re-echoed with bellowings, the bisons proceeded to assume the order which they always take under such circumstances, putting the calves in front to guard them from the attack of pursuing dogs, and carrying them before. When they reached the line occupied by the trackers and hunters, they were received with loud shouts and discharges of guns. Immediately the order of battle was changed; the old bulls rushed furiously towards the side, burst through the line of the hunters, and continued their victorious course, bounding along, and disdaining to occupy themselves with their enemies, who were lying close against the trees. The hunters managed, however, to separate from the herd two calves; one of these, three months old, was taken at one effort, another of fifteen months, though seized by eight trackers, overturned them all, and fled." It was subsequently taken, as were five others, in another part of the forest, one of them only a few days old. The savage impatience of man manifested by these young sylvans, was in the ratio of their age and sex. The bull of fifteen months maintained for a long time its sullen and morose behaviour; it became furious at the approach of man, tossing its head, lashing its tail, and presenting its horns. After a while, however, it became tolerant of its keeper, and was allowed a measure of liberty.

All the kinds of deer are shy and timid, but that fine species the moose of North America is peculiarly jealous and suspicious. The Indians declare that he is more shy and difficult to take than any other animal: more vigilant, more acute of sense, than the reindeer or bison: fleeter than the wapiti, more sagacious and more cautious than the deer. In the most furious tempest, when the wind, and the thunder, and the groaning of the trees, and the crash of falling timber, are combining to fill the ear with an incessant roar, if a man, either with foot or hand, break the smallest dry twig in the forest, the Indians aver that the moose will take notice of it; he may not instantly take to flight, but he ceases to eat, and concentrates his attention. If, in the course of an hour or so, the man neither moves nor makes the slightest noise, the animal may begin to feed again; but he does not forget what attracted his notice, and for many hours manifests ao increased watchfulness. Hence, it requires the utmost patience of an Indian hunter to stalk moose successfully.

The Indians believe that this animal, when other resources fail, has the power of remaining under water for a long time. It may be an exaggeration growing out of their experience of the many marvellous devices which he occasionally practises for self-preservation. and in which they believe he is more accomplished than the fox, or any other animal. A curious story is told, which may serve to illustrate the reputation of the beast in the eyes of those children of the forest, if it be worth no more. If there is any truth in it, we must assume that the animal managed to bring his nostrils to the surface at intervals: but how he could do this so as to elude the observation of his hunters is the marvel. For it must be borne in mind that they were Red Indians, not white men.

Two credible Indians, after a long day's absence on a hunt, came in and stated that they had chased a moose into a small pond; that they had seen him go to the middle of it and disappear, and then, choosing positions from which they could see every part of the circumference of the pond, smoked and waited until evening; during all which time they could see no motion of the water, or other indication of the position of the moose.

At length, being discouraged, they had abandoned all hope of taking him, and returned home. Not long afterwards came a solitary hunter, loaded with meat, who related, that having followed the track of a moose for some distance, he had traced it to the pond before mentioned; but having also discovered the tracks of two men, made at the same time as those of the moose, he concluded they must have killed it. Nevertheless, approaching cautiously to the margin of the pond, he sat down to rest. Presently, he saw the moose rise slowly in the centre of the pond, which was not very deep, and wade towards the shore where he was sitting. When he came sufficiently near, he shot him in the water.

The manner of hunting moose in winter is also illustrative of his recluse disposition. Deer are taken extensively by a process called "crusting;" that is, pursuing them, after a night's rain followed by frost has formed a crust of ice upon the surface of the deep snow. This will easily bear the weight of a man furnished with *rackets*, or snow-shoes, but gives way at once under the hoof of a moose or deer; and the animal thus embarrassed is readily overtaken and killed.

The moose, though occasionally taken by "crusting," seems to understand his danger, and to take precautions against it.

The sagacious animal, so soon as a heavy storm sets in, begins to form what is called a "moose-yard," which is a large area, wherein he industriously tramples down the snow while it is falling, so as to have room to move about in and browse upon the branches of trees, without the necessity of wandering from place to place, struggling through the deep drifts, exposed to the wolves, who, being of lighter make, hold a carnival upon the deer in crusting time. No wolf, however, dares enter a moose-yard. He will troop round and round upon the snow-bank which walls it, and his howling will, perhaps, bring two or three of his brethren to the spot, who will try to terrify the moose from his vantage ground, but dare not descend into it.

The Indians occasionally find a moose-yard, and take an easy advantage of the discovery, as he can no more defend himself or escape than a cow in a village pond. But, when at liberty, and under no special disadvantage, the moose is one of the noblest objects of a sportsman's ambition, at least among the herbivorous races. His habits are essentially solitary. He moves about not like the elk, in roving gangs, but stalks in lonely majesty through his leafy domains: and, when disturbed by the hunter, instead of bounding away like his congeners, he trots off at a gait which, though faster than that of the fleetest horse, is so easy and careless in its motion that it seems to cost him no exertion. But, though retreating thus when pursued, he is one of the most terrible beasts of the forest when wounded and at bay; and the Indians of the north-west, among some tribes, celebrate the death of a bull-moose, when they are so fortunate as to kill one, with all the songs of triumph that they would raise over a conquered warrior.

Who has not read of the chamois of the Alps and the Tyrol? and who does not know with what an unrelaxing vigilance it maintains its inaccessible strongholds? As long as summer warms the mountain air, it seeks the loftiest ridges, ever mounting higher and higher, treading with sure-footed fearlessness the narrow shelves, with precipices above and below, leaping lightly across yawning chasms a thousand yards in depth, and climbing up the slippery and perilous peaks, to stand as sentry in the glittering sky. Excessively wary and suspicious, all its senses seem endowed with a wonderful acuteness, so that it becomes aware of the approach of the daring hunter, when half-a-league distant. When alarmed, it bounds from ledge to ledge, seeking to gain a sight of every quarter, uttering all the while its peculiar hiss of impatience. At length it catches a glimpse, far below, of the enemy whose scent had come up upon the breeze. Away now it bounds, scaling the most terrible precipices, jumping across the fissures, and leaping from crag to crag with amazing energy. Even a perpendicular wall of rock thirty feet in depth does not balk its progress: with astonishing boldness it takes the leap, striking the face of the rock repeatedly with its feet as it descends, both to break the violence of the shock, and to direct its course more accurately. Every danger is subordinate to that of the proximity of man, and every faculty is in requisition to the indomitable love of liberty. Hence the chamois is dear to the Swiss: he is the very type of their nation; and his unconquerable freedom is the reflection of their own.

(To be continued.)

EDUCATION.

ARITHMETIC.

(Concluded.)

Form of Questioning.—Troy Weight.

Repeat the Table, and tell how many of one denomination equals another. How many pennyweights in 72 grains? How many in 288, in 480? Explain how you know. In 60 pennyweights, how many ounces? In 135, how many? Explain. Any remaining? Count up 20 to 400, repeat it downward and tell the number. In 144 ounces, how many pounds? Repeat the number of lbs. up and down. How would you reduce lbs. to pennyweights, and the pennyweights to ounces? How would you arrange the different denominations of this Table conveniently for adding? Could you add denominations from left to right, as well as from right to left? Continue such questioning till their understandings are well enlightened on the subject of questioning; and follow up the interrogatory drill by simple, easily-comprehended examples to be worked on slates. Be sure to graduate your questions suitably. Increase processes, and graduate their complexity, so as to suit the pupil's advancement, and the growth of his intellectual capacity. A knowledge of calculating principles in their varied applications, requires at first to be brought before the pupil's mind in their greatest simplicity, and with a suitable extent: but in proportion as his knowledge grows and his faculties develop, instruction must go deeper. It must plough its way deeper and deeper into the intellect,—carrying with it more vigour and life, and more extended knowledge and higher applications

Again: instruction to do its work efficiently must become with the scholar *himself an instrument of power.* But the mind must receive not only *impulse* and *field;* it has to give it *working skill*, by which it will become its own educative instrument. A potent educative life within will soon manifest itself without,—*in its progress.* What an advantage it is to a pupil to have his mind so trained as to have within itself a guiding intellectualizing power!

Proportion and Practice.

In commencing a new rule with a pupil or class, the teacher's duty is, FIRST, to explain the rule, its principles, their numeral applications and how they may be worked. And no set questions should be given till these, by simple applications with full explanations, are pretty well understood. To give children set questions to work in a new rule before they know anything about its principles, or how they are used in working them, goes in the face of common sense. First know, then do. First understand, then work.

As fractional parts are often, and with advantage, used in working questions in proportion, I would recommend exercising pupils first on aliquot parts, and such fractions as they can with explanation understand; then on the ratios of numbers; then on pairs of numbers, having a common ratio; and then on their applications in working questions.

Commence with visible illustrations, and so simplify them in beginning, as to make sure of reaching the understanding of the pupil.

Proceed as follows: First, aliquot parts.

$$f.\ \frac{2}{2} = \frac{1}{2} \,\Big|\, \frac{1}{2} = 2 \text{ feet.}$$

$$f.\ \frac{3}{3} = \frac{1}{3} \,\Big|\, \frac{1}{3} \,\Big|\, \frac{1}{3} = 3 \text{ feet.}$$

$$f.\ \frac{4}{4} = \frac{1}{4} \,\Big|\, \frac{1}{4} \,\Big|\, \frac{1}{4} \,\Big|\, \frac{1}{4} = 4 \text{ feet.}$$

} Each division is a foot.

First explain the lines and their divisions. Show that each division equals a foot; and the lines respectively 2 feet, 3 feet, and 4 feet. Each of the ones above the lines equals a foot in length; and the figures below indicate the number of feet in each line. Then explain how one foot is the $\frac{1}{2}$ of 2 feet; the $\frac{1}{3}$ of 3 feet; and the $\frac{1}{4}$ of 4 feet.

Exercise them in this way, with simple illustrations, on all the Tables, or till the principle of aliquot parts is well understood.

Then proceed to exercise them on the ratio of numbers. Explain what this mutual relation of two numbers to each other means. And in doing this, explain to them such words as you may have to use in your illustrations. Neglecting to do this, hundreds of teachers fail to make children comprehend the arithmetical rule of proportion. *Plain suitable words well understood* in using them, greatly help the pupil to understand what is taught him, and enables him at once to exercise his own mind understandingly upon the thing explained. Use, first, pairs of figures, easily comprehended, as follows: 2, 4; 3, 6; 4, 8; 5, 10; and so arrange them on the blackboard or slate as to enable the pupils readily to perceive the number of times the one is contained in the other; or the one is a part or parts of the other, thus:

$2 \div 4 = 2$ = equal the number of times the 4 contains the 2.
$3 \div 6 = 2$ = " " " 6 " 3.
$4 \div 8 = 2$ = " " " 8 " 4.
$5 \div 10 = 2$ = " " " 10 " 5.

Reversed.

$4 \div 2 = \frac{1}{2}$ = the part of 4 that 2 is.
$6 \div 3 = \frac{1}{2}$ = " 6 " 3 is.
$8 \div 4 = \frac{1}{2}$ = " 8 " 4 is.
$10 \div 5 = \frac{1}{2}$ = " 10 " 5 is.

Fully explain the proportions of these numbers to each other; how one number contains another so many times, or is a part of it, which we call their proportions. Question on these till answers tell that the principle of proportion is so far understood. Then proceed a step farther, and give numbers whose ratios have fractions or fractional forms, as follows:

$$\left.\begin{array}{l} 5 \div 26 = 5\frac{1}{5} \\ 6 \div 14 = 2\frac{1}{3} \\ 7 \div 15 = 2\frac{1}{7} \end{array}\right\} \text{Reversed.} \left\{\begin{array}{l} 26 \div 5 = \frac{5}{26} \\ 14 \div 6 = \frac{6}{14} \\ 15 \div 7 = \frac{7}{15} \end{array}\right.$$

Explain and question; and make themselves give examples,—thus showing that the principle is understood. Such exercises will prepare them for examples on pairs of numbers having the same proportions. Begin as follows:

$$\left.\begin{array}{l} 39 \div 13 \\ 48 \div 16 \end{array}\right\} = \frac{1}{3} = \text{ratio of both pairs.}$$

In following up your illustrations at this stage, give the numbers their usual arrangement, thus:

7 is to 21 as 20 is to 60; 15 is to 5 as 81 is to 27. That is 21 is to 7 as 60 is to 20,—the one is three times the other; and 5 is to 15 as 27 is to 81: that is, the one is a third of the other. Such simple examplifications, if intelligently followed up, will not only unfold to them the doctrine of ratios; they will prepare them for a farther advance. Give now three numbers to find a fourth having the same proportion to the third that the second has to the first, thus:

Find a number that contains 6 as often as 8 contains 4. Ans. 12.—Explain. Question: 150 contains 15 tens; find a number that is 15 times 68? Ans. 1020.

Explain and arrange the terms.

A few such examples will prepare them for simple questions, such as the following:

2 lbs. of butter and 18 lbs. of butter; make their prices in proportion to their quantities. Tell their prices in as many ways as you can.

Answers in cents.

lbs. lbs.	Cents. (Prices of 2 lbs.)		Cents. (Pric. of 18 lbs.)	
2 : 18 ::	5	:	45	Ratio 9.
	7	:	63	
	8	:	72	
	11	:	99	
	13	:	117	

Here remember you are passing from the simple to the more complex part of your work. Hence the necessity of at first simplifying every part of the work of your illustration by processes of reasoning,—each step of which should carry the conviction of the pupil with it—encouraging self-effort—because comprehended.

And should one process of reasoning not remove difficulties, nor give clearness to the understanding, leave not the subject. Try another; and repeat your trials till successful. Take the question I have given as an example; and explain as follows: the price of two lbs. is 5 cents; the price of 18 lbs. is, therefore, 45 cents. 18 lbs. are nine times 2 lbs.; the price of 18 lbs. must then be nine times the price of 2 lbs., namely, 45 cts. Otherwise: 2 lbs. of butter are worth 5 cents, then 1 lb. is worth $2\frac{1}{2}$ cents; and if 1 lb. is worth $2\frac{1}{2}$ cents, 18 is worth $18 \times 2\frac{1}{2} =$ 45 cents. Again: if we multiply 2 by 45, and 18 by 5, we get the same product, viz., 90. They are equally increased. The proportion of 2 and 18 is 9; the proportion of 5 and 45 is also 9; and twice 45, and 5 times 18 are 10 nines, or 90. This, likewise, proves that the proportions of the quantities and their prices are the same. But, again: if we lessen the quantities and the prices equally, their proportions must continue, thus:

$$\begin{array}{l} 2)\underline{2 : 18 :: 5 : 45} \\ \quad 1 : 9 :: 2\frac{1}{2} : 22\frac{1}{2} \end{array}$$

For 1 is nine times less than 9; and $2\frac{1}{2}$ is nine times less than $22\frac{1}{2}$; or we can say 9 are nine times 1, and $22\frac{1}{2}$ are nine times $2\frac{1}{2}$; or the terms may be increased by 2 or any figure, the same

relation must continue. Proceed in this way to explain and illustrate the proportion of numbers, and a very few examples will make the rule sufficiently plain to pupils, intelligently to work questions, and *without the necessity of stating them by rule*, before they can work them.

They should now be able to form set simple questions for themselves, work and explain them to you; and as they explain them, their answers to your questions will at once show the knowledge they are acquiring from your own expositions. And as they answer see that every correct answer you get takes its place *in their minds as a permanent part of their onward course;* and that *incorrect answers, or anything incorrect in their answers, be not passed till corrected.* Any incorrect impression allowed to take hold on the pupil's mind at any stage of his schooling, is most likely to become afterwards a stumbling block to him, a *difficulty* which will be found *most difficult to remove*, - nay, may injuriously affect his mind through life.

After your pupils have commenced to work set, or book questions, do not discontinue illustrating the application of principles to them; make it a rule to put them through drill questioning on their work. Knowing this to be your duty, and, indeed, to be the most effectual way to keep the pupil's mind awake in the work, and a check on his doing any part of it without intelligently exercising his mind upon it, never allow any part of your teaching, so far as you can, to remain on the mere threshold of the pupil's understanding. Ever let it be your aim—to give every part of your teaching a *home in his intellect*. And now that I am about bidding you good bye for a little, accept the parting word:—At this stage of advance, your pupils should be able to take a more comprehensive view of numbers and their various relations and numberless applications. Expertness and skill in their manipulations and many of their relations in working results should be considerable. All their faculties should be so trained as to be able, at this stage, to enter on a much wider field for mental train. To this stage nearly all the course was preliminary. Now, the trying,—searching,—experimenting,—inventing powers of the mind should be more fully worked by themselves, guided, however, so far as found necessary, by the master. The bloom of previous training should now manifest itself. The more reflective period of school training should now have commenced. More independence of thought should show itself. The inventive faculties should show more developing power; and the reasoning powers should give indications of more independence and unbiased exercise. Originality of thought in experimenting and working out various results, should be evidence of efficient training. Such effects are, or ought to be, to every teacher the true measure of his teaching and training skill.

With yourself there must always be an irrepressible earnestness,—deep searching study,—experimenting efforts to unfold numeral principles —even to their minutest fibrils,— the study of plain expressive language, to carry home to the scholar, and impressively, ideas on every subject you illustrate. To be successful with children, you must become a child, in thought, language, feeling and action. Ignorance lies deep in the mind of every child, and progressively to work it out requires far more skill, and effort, and deep searching study, than is generally believed.

JOHN BRUCE,
Inspector of Schools.

Teacher-Artists.

It is said of the ancient Greek and Roman artists, they who most excelled in painting, and presented to the world the most masterly pieces of art, that when they wished to produce a beautiful creation, they spent much time before they devoted themselves to their work, in fasting and prayer, in order that they might purify their souls by holy thought, so that no creation of their minds might appear in the picture, but such as was pure and beautiful.

In accordance with their belief that the ideas and thoughts held in the mind would be embodied in the composition, they were led to examine themselves closely, and to prepare themselves carefully before entering upon their work.

Cannot we, who have devoted ourselves to the holy work of teaching, find in this a weighty lesson, and perhaps a keen reproof? Can we, who are daily and even hourly, working on pictures which shall live, even when the "rushing chariot wheels of time" shall have ceased to roll, face the thought, and say that we are innocent? Were it possible to unroll the "spirit-canvas" on which we have been painting, that we might *see* the pictures we have wrought, could we gaze thereon and say we were guiltless? Think we, that no dark traces there would face our guilty souls, and tell us we had not prepared ourselves by earnest thought and prayer, that we might paint them well? Oh! when we think that—

> "Each one is an artist, ever painting
> Tints of radiant beauty, hues of light,
> Which must live in an immortal picture,
> Or defacing it with spot and blight,"

how do we almost tremble at the great responsibility of painting? Steadily, day by day, beneath our unconscious hands, the picture is developing. Our very thoughts, and words, and actions, which seem to us so small, have each left there, their trace for good or evil. If they who wrought but on pictures which were perishable, deemed it so important that they should be prepared by communion with the Great Source of the Beautiful, how much more should we who are working for eternity? As imitation is one of the most distinctive elements of childhood, the loveliness of virtue, or the more unbeauteous aspect of sin, as demonstrated in our own daily lives, cannot fail to be reflected by the actions of those little ones, with whom we are constantly associated. As in this case, those who go before them go as a model to be studied, learned and imitated, of how great importance is it that this should be of such a nature as to leave no other than beautiful impressions on the picture formed within? For,

> "If upon the stainless spirit-canvas,
> Which our Father's hand to us has given,
> Coarse, unsightly daubs are seen, we cannot
> Place it in the galleries of Heaven."

Oh! then, with how much care, "with hand how firm and steady," should each line be drawn in this picture which must be eternal!

Can we not vie with Greece and Rome? As they, by earnestness and zeal, have given to the world most noble works of art, cannot we, as faithful artists of our Lord, give also works of highest, worthiest merit; pictures, whose heaven-born glory shall gleam along earth's darkened halls of sin, and light our pathway to the land of the Beautiful beyond?

Perchance our pictures may be *early* called for by Him for whom we paint. Shall we not then, at thought of this, revive our flagging energies, and work in such a way that we might render them with joy?

Teachers, it is for us to say whether these pictures will be beautiful or otherwise. For us to determine in a great measure whether they *will* have a place in the "galleries of Heaven." Do we, as artists of the olden time, prepare ourselves with earnestness to enter upon our work? We cannot hope to produce beautiful creations, if the picture within our own souls is coarse and glaring.

Oh! if we find that we have *not* an artist's hand, were it not better that we should go our way, and leave *no* picture there, than mar the pure blank page by images unholy, which but throw shame upon the noble cause, and sin upon the painter?

As the artist seeks in flights of fancy more beauteous forms and colors with which to adorn his work than earth has yet afforded him, so we, by prayer may mount above the world's unlovelier state, and find the *real* things which shall make our pictures beautiful.

Be this our care, oh! Artists of the "Eternal Years," that here within our Master's studio where each of us are painting, it may not be seen that we have worked but carelessly; that we have but defaced the sheet by such images as but "pierce the coarser sense," but with patience and prayerfulness, labor,

> "Till at length, completely crowned,
> The wonder reared, enriched and wrought,
> Comes in transfigured symmetry,
> Out of the Realm of Thought."

(Iowa Instructor.)

OFFICIAL NOTICES.



APPOINTMENTS.

SCHOOL INSPECTOR.

His Excellency the Governor General in Council was pleased, on the 19th instant, to appoint Charles DeCazes, Esquire, to be Inspector of Schools for the District of Inspection comprising the Counties of Bagot, Rouville, and St. Hyacinthe, in the place of Ch. H. Leroux, Esq.

SCHOOL COMMISSIONERS.

His Excellency the Governor General in Council was pleased, on the 31st ult., to approve of the following appointments of School Commissioners:

County of Yamaska.—St. David: Messrs. Calixte Bousquet and Abraham Manseault.

His Excellency the Governor General in Council was pleased, on the 8th instant, to approve of the following appointments of School Commissioners, viz:

County of Shefford.—Roxton: Alfred Rocque, Esq.

County of Shefford.—South Ely: Messrs. Narcisse Bissonnet and Magloire Trudeau.

County of Beauce.—St. Côme: Messrs. George Rodrigue, Joseph Bélanger, François Morrissette, Pierre Genest and Sévère Poulin.

County of l'Assomption.—Village of l'Assomption: Mr. Elisée Forest.

County of Saguenay.—Tadoussac: Messrs. Luc Maltais and François Bourgoin.

County of Arthabaska.—Chénier: Mr. Louis Morin.

City of Quebec.—Rev. Joseph Auclair, Messrs. Jacques Crémazie and Charles Eusèbe Lemieux.

County of Lotbinière.—North St. Sylvester: Messrs. Bernard McGuire, Thomas Bourgeau and Robert Lipsey.

County of Laval.—Bas du Bord de l'Eau de St. Martin: Messrs. Walter Nelson and François Charon.

County of Terrebonne.—Parish of Terrebonne: Messrs. Joseph Gauthier and Joseph Filion.

County of l'Assomption.—St. Narcisse: Mr. François Veillet.

County of Arthabaska.—St. Albert: Prudent Lainesse, Isaac Héroux, Charles Déry, Esquires, and Messrs. Joseph Ducharme and Fidèle Demers.

County of Dorchester.—Ste. Marguerite: Messrs. Jean-Baptiste Lehoulier and Joseph Perron.

County of Temiscouata.—Notre-Dame du Portage: Mr. Edouard Michaud.

TRUSTEES OF DISSENTIENT SCHOOLS.

His Excellency the Governor General in Council was pleased, on the 8th instant, to approve of the following appointments of Trustees of Dissentient Schools, viz:

County of Quebec.—St. Columban: Edward Burstall, Archibald Campbell, Charles Challoner Smith, Esquires.

County of Megantic.—Inverness: Mr. James Henry.

DIPLOMAS GRANTED BY THE NORMAL SCHOOLS.

LAVAL NORMAL SCHOOL.

Model School.—Julien Cloutier and Geo. Ferdinand Morisset.

Quebec, 25 July, 1865.

DIPLOMAS GRANTED BY BOARDS OF EXAMINERS.

QUEBEC BOARD OF CATHOLIC EXAMINERS.

2nd Class Model school (E.)—Henry Goodwin.

2nd Class Elementary (F.)—Joséphine Labrecque, Adéline Amarilda Bazin, Adéline Marchand, Luce Proulx.

May 27, 1865.

2nd Class Elementary (F.)—Marie Elizabeth Dorval.

September 15, 1865.

N. Lacasse,
Secretary.

BOARD OF EXAMINERS OF AYLMER.

1st Class Elementary (E.)—Sarah S. Hall; *(F.)* Joseph Damase Gauthier.

2nd Class Elementary (E.)—William Mahar, Joseph Damase Gauthier.

August 1, 1865.

John Woods,
Secretary.

BOARD OF EXAMINERS OF RIMOUSKI.

1st Class Elementary (F.)—Ulfranc St. Laurent; Praxède Lefèbre *dit* Bélanger, Eléonore Paradis, Rosalie Pouliot, Marie Agathe Ringuet.

2nd Class Elementary (F.)—Marie Eléonore Corbin, Clémentine Léveillée, Arthémise Morency.

August 20, 1865.

P. G. Dumas,
Secretary.

BOARD OF EXAMINERS OF CHICOUTIMI.

1st Class Elementary (F.)—Marie Léonille Bouchard, Joséphine Philomène Bouchard, Marie Caroline Claveau, Alexandrine Godreault; Edouard Evenant Tremblay, Séraphin Truchon, Benjamin Vandal.

2nd Class Elementary (F.)—Aurélie Doré, Marie Anne Pacaud.

August 1, 1865.

Ths. H. Cloutier,
Secretary.

NOTICE TO SCHOOL COMMISSIONERS AND TRUSTEES.

In pursuance of a Resolution adopted by the Council of Public Instruction for Lower Canada, on the 9th May, 1865, and duly approved by His Excellency the Governor General in Council, notice is hereby given that from and after the 1st JULY, 1866, no Academy, Model School, nor Elementary School in Lower Canada, shall any longer be permitted to use other books than those approved by the said Council of Public Instruction, and that the Superintendent of Education shall be requested to refuse the grant to School Municipalities contravening this Rule.

NOTICE TO SCHOOL COMMISSIONERS AND TRUSTEES.

School Commissioners and Trustees are requested to transmit to this Department, as in duty bound, the names of all persons elected by the Ratepayers for School purposes, whether they be elected during the month of July or at any other time. The information thus to be furnished being indispensable, the grant will be withheld from Municipalities not complying with this notice.

NOTICE TO TEACHERS.

Teachers' signatures affixed to Semi-Annual Reports should correspond with their first and family names as given by them to the Secretary of the Board of Examiners from which they obtained their diplomas, in order that those Municipalities in which they are employed may not experience any delay in receiving their allowances.

SITUATION WANTED.

A gentleman from the University of Cambridge, England, and his wife are desirous of giving instruction. He can teach the Classics, the general branches of English, Drawing, and Flower Painting. The lady would teach English, the elements of French, and Music. The highest testimonials will be furnished. Apply at the Education Office.

A young lady holding a Model School Diploma from the McGill Normal School, is desirous of a situation as Teacher. Enquire at this Office.

JOURNAL OF EDUCATION.

MONTREAL (LOWER CANADA), SEPTEMBER, 1865.

Teachers' Diplomas.

We copy *in extenso* a short statute passed during last session on the above subject This law being very short and clear, will speak for itself.

It was feared that the obligation which bound certain teachers to renew their diplomas after three years, would in many cases be a hardship. By the new statute the matter is left to be regulated by the Council of Public Instruction. Until regulations shall have been passed by that body, and approved by His Excellency the Governor General in Council, all diplomas will remain in force.

An Act to amend Chapter Fifteen of the Consolidated Statutes for Lower Canada, respecting Education.

Whereas it would conduce to the advancement of Education in Lower Canada to extend the duration of certificates granted to teachers under the one hundred and fifth and one hundred and sixth sections of Chapter Fifteen of the Consolidated Statutes for Lower Canada; Therefore, Her Majesty, by and with the advice and consent of the Legislative Council and Assembly of Canada, enacts as follows:—

1. The one hundred and sixth section of Chapter fifteenth of the Consolidated Statutes for Lower Canada, is hereby so amended as to read thus:—

106. The certificates granted and to be granted by every such Board constituted under the next preceding section, shall only avail for the employment of the Teachers obtaining the same, within such County or Counties, and for such class or classes of Schools, as the Governor in Council, upon the report of the Council of Public Instruction, may from time to time ordain; and those granted after the fourth day of March, one thousand eight hundred and fifty-nine, by the several Boards of Examiners in the Cities of Montreal and Quebec, and in the Districts of Kamouraska, Gaspé, Three Rivers and Ottawa, and in the Counties of Sherbrooke and Stanstead respectively, shall in like manner only avail for such territorial limit, and for such class or classes of Schools, as the Governor in Council upon like report may from time to time ordain.

2. The Council of Public Instruction for Lower Canada, by regulation to be approved by the Governor in Council, may from time to time provide in such manner, and under such conditions as may be deemed expedient, for requiring any Teacher or Teachers holding any certificate granted by any Board of Examiners of Teachers in Lower Canada, to submit to examination *de novo*, by such Board; and in default of any such Teacher so doing, or in case of failure thereupon for any cause to obtain a new certificate, the certificate theretofore granted shall become and be held null and void.

Re-opening of the School of Agriculture of St. Anne.

We reproduce the following information from the *Gazette des Campagnes*. The number of pupils who entered the School of Agriculture of Ste. Anne from the first of September, when the present term commenced, to the end of that month, was thirteen. Of this number, ten were entitled to the bursaries founded by the Board of Agriculture for Lower Canada, and three were left entirely dependent on their own resources.

As those who enter this school to prepare themselves for so useful an occupation as that of the agriculturist deserve honorable mention, we subjoin their names, which are as follows:

Michel Gauvin, Ancienne Lorette; Augustin Fortin and Auguste Gagné, Islet; Adélard Forgues, St. Michel (Bellechasse); Cyprien Langlois, St. Laurent (Isle d'Orléans); Ernest Ouellet, Ste. Anne; Elie Lepage, Rimouski; Narcisse Gauvin, Ancienne Lorette; Damase Roy, St. Valier (Bellechasse); Ephrem Desnoyers, St. Jean-Baptiste (Rouville); John Hector, Toronto; Pierre Valois, Point Claire (Montreal); Jacques Cartier, St. Antoine (Chambly).

Twelve additional pupils were expected in the earlier part of the present month, ten of whom were to be inscribed on the roll as bursars. This will make the attendance much greater than in previous years,—a gratifying proof that scientific agriculture is steadily gaining friends in Canada and that the prospect of ultimate success is encouraging and satisfactory.

To gain admittance to the school it is requisite that candidates shall, 1st, present unimpeachable testimonials as to morals and character; 2ndly, they must be *at least* sixteen years of age; and 3rdly, they must be able to read and write the French language, and possess a knowledge of the first four rules of arithmetic.

Pupils will be charged twenty-four dollars a year, payable in advance in instalments of eight dollars each, the Terms ending the 1st January, 1st May, and 31st December. Whenever a Term shall have been commenced the fee must be paid in full, even if the pupil shall be absent or leave the school altogether. On payment of the fee a pupil, besides receiving instruction, will be entitled to admittance to the library, to the use of the tools and implements, and he will also be supplied with bed and bedding excepting sheets.

Books, paper and other articles of stationery will be furnished at the request of parents, and charged at the prices current in Quebec. This will probably average one or two dollars more per annum.

The boarding department is conducted by Madame E. Ouellet, under the immediate *surveillance* of the Principal. Terms $6 a month, payable in advance.

The pupils enjoying the partial bursaries founded by the Board will be required to pay but $2 each term for instruction, and $3 per month for board.

Twenty-seventh Meeting of the Teachers' Association in connection with Jacques-Cartier Normal School.

This Convention met on the 25th August last.

Present: The Hon. the Superintendent of Education, Messrs. Caron, Valade and Stenson, Inspectors of Schools: Mr. J. E. Paradis, President: Mr. Emard, Vice-President; Messrs. L. H. Bellerose, H. T. Chagnon, A. Dalpé, H. E. Martineau and J. B. Priou, Members of the Council of the Association; Messrs. U. E. Archambault, A. Aubuchon, S. Aubuchon, C. Brault, H. C. H. Chagnon, C. Ferland, N. Gervais, B. Guérin, M. Guérin, O. Lamarche, A. Lamy, A. Mallet, H. O'Regan, L. René, H. Rondeau, J. E. Roy, P. H. St. Hilaire and the teacher-pupils of the Normal School.

The Secretary being absent, Mr. Archambault consented to act in his place.

The minutes of last meeting (held in May) were read and approved.

Mr. N. Gervais read a paper on the necessity of adopting an improved course of studies in the schools, in which he showed how this object could be attained with advantage.

Messrs. Caron, Stenson, Lamy, H. E. Martineau, St. Hilaire and Archambault ably discussed the question, whether the definitions of the rules of arithmetic should be learned by children, or whether they should merely be explained to them.

Mr. Emard, president of the meeting, in a review of the debate expressed his gratification at finding that the great majority of the speakers were of the opinion that the definitions of the rules of arithmetic should be learned by heart, in accordance with the principle that in teaching, a text should always be referred to.

Mr. C. Brault read a paper on *Meteorology*.

The Hon. the Superintendent of Education complimented Messrs. Gervais and Brault on their instructive and interesting essays, and gave valuable advice to the teachers, impressing upon them the duty of devoting themselves to the practical improvement of their schools; one of the best means to accomplish this end would be to hear from each teacher, at these meetings, details on his particular method of instruction and manner of managing his pupils so as to obtain the best results in the least possible time. He also invited the Inspectors to give similar details in their reports, reminding them that their remarks on these subjects were always published *in extenso*.

It was then resolved, on motion of Mr. Archambault, seconded by Mr. St. Hilaire, that the following question be postponed until next meeting, viz: Which grammar is to be preferred, Poitevin's or Chapsal's?

The names of Messrs. H. E. Martineau, A. Dalpé, H. Pesant, F. X. Manseau, M. Guérin and O. Lamarche were announced as those of the members chosen by the Council of the Association to prepare essays for the next meeting.

Mr. Inspector Valade also entered his name for a lecture.

The following subjects were then chosen for discussion:

1. Which grammar is preferable, Poitevin's or Chapsal's?—Debaters inscribed, Messrs. Boudrias and Cassegrain.

2. What is the best method of teaching the rules of Interest in arithmetic?—Debaters inscribed, Messrs. Bellerose and Emard.

The Convention then adjourned to the last Friday in January next, at 9 A. M.

Report on Public Instruction for 1864.

We publish in this number the Report proper, the appendices of which contain, No. 1, Special Reports on the Normal Schools, and the Inspection of Boards of Examiners; No. 2, Extracts from the Reports of the Inspectors of Schools; No. 3, Statistical Tables; No. 4, Financial Statements, in all 315 p. The table marked I is but the conclusion of table B, and ought to have followed the latter. This report is sent free to teachers, ministers, and school corporations. To other persons it is sold at 50 cts., and can be procured at the Education Office or at the booksellers.

Report of the Superintendent of Education for Lower Canada, for the Year 1864.

To the Honorable
The Provincial Secretary,
Quebec.

Education Office,
Montreal, 14th March, 1865.

Sir,—I have the honor to submit my report on the state of public instruction in Lower Canada, for the year 1864.

This report is accompanied with the detailed statistical tables and extracts from the reports of the School Inspectors, which, in pursuance of the decision of the Committee on Printing, are to be published only every three years.

The reports of the Inspectors again refer to the obstacles to the working of the law and to the progress of primary instruction, which have so often been pointed out in my reports, and which have been, up to the present time, but partially remedied by the legislative and administrative measures adopted. I have also already indicated the steps to be taken to remedy this state of things, but other more pressing, if not more important, claims on their attention have, doubtless, hitherto prevented the Government and the Legislature from carrying out these suggestions, which I shall, nevertheless, again reiterate in the hope that, sooner or later, favorable circumstances may permit the accomplishment of another movement similar to that effected by the legislation of 1856, and by the administrative measures which were its result and development.

The most important points are:—

1st. The great difficulty still experienced in procuring school appliances, books, geographical maps, and all objects required in teaching.

2nd. The insufficiency of the majority of the school-houses, their contracted dimensions and disadvantageous interior distribution in respect of hygiene, and the promotion of public instruction.

3rd. The smallness of the salaries of the teachers, and their precarious position in consequence of frequent abuse of authority in relation to them on the part of the school commissioners.

The establishment of normal schools stands in the first rank among the measures adopted with a view to increase the efficiency and improve the position of the teacher. In establishing these schools the same principle that obtained in the establishment of dissentient schools led to the granting of separate normal schools for the two great religious divisions of the population, the Catholics and the Protestants.

An almost necessary consequence of this division was the establishment of two Catholic normal schools, and one Protestant normal school: the great mass of the Protestant population of Lower Canada being located in the western section, it followed that the Protestant normal school must be established at Montreal. But as the Catholic population of the Montreal section is numerically, if not relatively, more considerable than that of the Quebec section, it was difficult to avoid placing a Catholic normal school at Montreal; while on the other hand it was evident that the geographical position of that city, by no means a central one as regards the rest of Lower Canada, did not entitle it to enjoy alone the advantage of possessing these institutions. If this arrangement was open to the objection of increasing the expenditure, it also afforded the advantage of disseminating the training of teachers over a larger surface, and in such a manner as to reach all classes of the population and all sections of the country. There is no doubt whatever but that the three normal schools have attracted a far larger number of pupils and popularised the new systems of teaching much more effectually than a single school would have done.

Among the objections made to the establishment of these institutions, the first was the small number of pupils they would have, and, at all events, it was said, the small number who would obtain diplomas, and, having obtained them, engage seriously in the work of teaching.

The following table of the total number of pupil-teachers who have attended the normal schools since their establishment is a sufficient proof that the first objection was unfounded. The number would have been much greater had not the insufficiency of the grant hitherto prevented the establishment of a female pupil-teacher's department in the Jacques Cartier School.

Table of the number of pupils who have attended the normal schools:

School Year.	Jacques-Cartier School.	McGill Sch.			Laval Sch.			Number of Male Pupil-Teachers.	Number of Female Pupil-Teachers.	Grand total.
	Male Pupil-Teachers.	Male Pupil-Teachers.	Female Pupil-Teachers.	Total.	Male Pupil-Teachers.	Female Pupil-Teachers.	Total.			
1st session, 1857.	18	5	25	30	22	....	22	45	25	70
1857–1858.	46	7	63	70	36	40	76	89	103	192
1858–1859.	50	7	76	83	34	52	86	91	128	219
1859–1860.	53	9	72	81	40	54	94	102	126	228
1860–1861.	52	5	56	61	41	53	94	98	109	207
1861–1862.	41	10	58	68	39	52	91	90	110	200
1862–1863.	57	8	72	80	39	52	91	104	124	228
1863–1864.	56	7	67	74	34	49	83	97	116	213

The following table shews the number of diplomas granted in each school and for each degree of teaching. The number, it will be seen, is 723 in all; but this figure represents more than the number of pupils who left with a diploma, for many of them received two and even three diplomas successively. The number of graduates is, therefore, less than the number of diplomas granted, and is divided as follows among the three schools:—

Jacques-Cartier School....................	106
Laval School..............................	233
McGill School.............................	236
	575

This is more than one-third of the total number of pupils; and while, on the one hand, this proportion proves the severity of the examinations, on the other it establishes the success of these institutions.

DIPLOMAS granted to pupils of the normal schools since the establishment of these institutions:—

Kind of diplomas granted.	Jacques-Cartier.	McGill.			Laval.					
	Male Pupil-Teachers	Male Pupil-Teachers.	Female Pupil-Teach.	Total.	Male Pupil-Teachers.	Female Pupil-Teach.	Total.	Numb. of Male Pupil-Teach.	Numb. of Female Pupil-Teach.	Grand Total.
Academy	12	3	...	3	12	...	13	28	...	28
Model School	73	9	94	103	59	74	133	141	168	309
Elementary School....	73	27	181	208	23	83	106	123	264	387
Total	158	39	275	314	95	157	252	292	432	724

As to the willingness of the former pupil-teachers to teach, and their perseverance in teaching, the reports of the Jacques-Cartier and Laval Normal Schools contain information which, on the whole, as pointed out by the Principal of the latter school, almost surpasses our hopes.

I have no doubt whatever but similar results can, if necessary, be shewn as regards the former pupils of the McGill School.

The inference from these statements is that the vast majority of the former pupils have been engaged in teaching; that a large proportion of those who received their diplomas previous to 1862, and whose three years' term of teaching, specified in the application for admission to the school, is now expired, are still teaching, and seem to have adopted teaching as a permanent career; and, finally, that almost all those who have not taught, or who have done so but for a short period, have been able to plead the excuse of sickness or reasons entirely beyond their control. Those who have wilfully failed to carry out their engagement form but a very small proportion, and they have almost all paid the fine.

With these remarks, I now give the enumeration of the results obtained.

Of the 106 pupil-teachers who have obtained diplomas at the Jacques-Cartier Normal School—

47 were teaching at the date of the report;
14 who had just received their diplomas, were commencing, or about commencing to teach;
3 were dead;
20 were no longer teaching, but had taught:
10 were continuing their studies at the Normal School;.
12 had not taught.
—
106

Moreover, 14 were teaching or had taught without holding the diploma of the Normal School, having obtained that of one of the Boards of Examiners. This gives a total of pupils teaching, or who have taught after attending the school, including the 14 recently admitted as teachers, of 95.

Of the 47 former pupils holding diplomas who were still teaching at the close of the year 1864, previous to the distribution of diplomas—

7 have taught during		7 years.	
4	"	6	"
1 has	"	5	"
5 have	"	4	"
9	"	3	"
10	"	2	"
10	"	1	"

Of those who are no longer teaching—

8 have taught during		4 years.	
1 has	"	3	"
2 have	"	2	"
9	"	1	"

In the case of the latter, as has been pointed out, ill-health and the difficulty of finding new situations have had some share; reducing to a very small figure the number of those who have voluntarily abandoned teaching after having engaged in it.

As regards the Laval Normal School, of the 81 pupil-teachers holding diplomas at the date of the report—

43 were teaching;
15 were no longer teaching;
2 were school inspectors;
4 had died;
2 were finishing their studies at college;
7 continued at the Normal School;
8 only had not taught.
—
81

Moreover, 10 who had not obtained a school diploma were teaching, or had taught, under diplomas from the Boards of Examiners; one of those who died, and two of those who had returned to the school, had also taught for some time; this gives a total of 79 teaching, or who have taught.

In like manner, of 152 female teachers holding school diplomas—

112 were teaching;
30 had taught;
4 had died;
4 were teaching at the school;
2 only had not taught.
—
152

Moreover, 16 were teaching under diplomas; 7 had taught in that manner; one died while teaching; and one returned to the Normal School, after having been engaged in teaching; making 167 teaching, or who have been engaged in teaching.

Of the 43 former male pupil-teachers, and the 112 former female pupil-teachers holding the diploma of the school, who were still engaged in teaching at the date of this report,

6 had been teaching for		7 years.	
18	"	6	"
23	"	5	"
17	"	4	"
27	"	3	"
30	"	2	"
34	"	1	"

Of the 18 male pupil-teachers, and the 34 female pupil-teachers holding the diploma of the school, who have ceased to teach—

1 taught for		6 years.	
5	"	5	"
4	"	4	"
8	"	3	"
20	"	2	"
14	"	1	"

Thus the Laval and Jacques-Cartier Normal Schools have, since their establishment, sent out 341 individuals who have engaged in teaching, of which number 249 were teaching at the date of the reports.

Of the number of former pupils holding diplomas, 13 had taught for seven years—that is, since the first distribution of diplomas, and are at present still engaged in teaching; 23 for six years; 29 for five years; 34 for four years; this gives 99 former pupils who have taught for a greater number of years than are required by the regulation, and who, with the exception of 18, were still teaching at the date of the reports.

The number of those who had taught for three years amounted to 45: these, with the exception of 9, are still teaching at the present time. In these latter figures, those who have taught with a diploma from the Board of Examiners, or without any diploma, are not taken into account. It is also to be observed that amongst those who have given up teaching are included two teachers who have been promoted to the important office of school inspector, several others whom their health has compelled to retire, and some who, as has been seen above, have returned to the Normal School to prepare themselves to acquire a diploma of a higher class. Lastly, the total number of pupils holding diplomas who have not engaged in teaching at all only amounts to 22, and of this total a portion is to be ascribed to illness and accident.

In the absence of positive information as to the results obtained with respect to the former pupils of the McGill Normal School, the number of pupils who have gone forth from our Normal schools and engaged in teaching may be safely set at 500, and the number of those who are now teaching at 400.

But, even supposing that such favorable results had not yet been attained, there would be no ground for discouragement, for the usefulness of institutions of this description is not to be calculated only by the number of teachers who have gone forth from them, but also by the influence which they exercise directly and indirectly over the instructing body. Now, there can be no doubt but that the establishment of Normal schools, and the dispersing over various parts of the country of the pupils from those schools, has given rise to a great spirit of emulation, and contributed to diffuse better systems of instruction. A considerable number of the pupils from the schools have even penetrated to the most remote parts of the country, and are teaching in new settlements in which, not very long ago, some difficulty was experienced in obtaining teachers who were merely holders of diplomas from a Board of Examiners.

The attention of the Government and of the Legislature has been frequently drawn to the urgent necessity of erecting suitable buildings for the Laval and Jacques-Cartier Normal Schools. The arrangement by which the former of those schools is still located in a hired building, to which is attached no court-yard or play-ground, is far from being economical or advantageous in any respect.

With respect to the Jacques-Cartier Normal School, I have had the honor of frequently representing to the Government that the wing of the old Government House, occupied by that institution, is not only insufficient for the purpose, but also that, in consequence of irremediable defects in construction, its ruin is impending, and may from day to day place the lives of professors and pupils in jeopardy. The erection of these buildings is therefore one of the most urgent requirements of this department, if it is wished to persevere in normal instruction and the training of teachers.

Among other means calculated to increase the efficiency of the body of teachers hitherto employed, are the establishment of a savings' fund for aged or sick teachers, the publication of a Journal of Public Instruction in both languages, the establishment of conferences of teachers, and the re-organization, under more stringent regulations, of the Boards of Examiners.

In several previous reports it has been already proved that the savings' fund can never attain a flourishing condition until the Government grant shall have been increased by one-half.

Conferences of the different associations of teachers which have been formed in Lower Canada have been attended by an encouraging number of the members of the instructing body; it is, however, to be desired that all teachers should participate at least once or twice during the year in the great advantages which may result from these institutions. School commissioners have been strongly recommended to grant freely to teachers leave solicited for this purpose, in view of the certain and ample compensation which they will receive for the time lost in the improvement of the systems of education, and the progress of all kinds which will ensue. The teacher's courage is tempered; he feels revived by contact with his fellows and his superiors, and returns to his daily labor at the conclusion of the conferences with renewed energy. The different essays read by the teachers, and the sketches of the educational discussions which followed in those associations, have constituted one of the most important and useful resources in the editing of the Journal of Public Instruction.

The re-organization of the Boards of Examiners, and the enforcing of new regulations, appear to have had a salutary effect on the composition of the educating body. Several branches of instruction have received a new impulse in our primary schools in consequence of the publication of the programme of examination.

One of the most important points of the new regulation is the inspection of the Boards by the delegates of the Council of Public Instruction. I subjoin to this report those which have been hitherto submitted by the delegates in question.

The following is a summary of the annual statistical returns which the secretaries of the Boards are bound to transmit to this Department:—

ANNUAL STATISTICAL SUMMARY of the Boards of Examiners in Lower Canada, for the year 1864.

BOARD AT	Duration of the sittings, in days.	Number of candidates examined.	Average number of teachers examined daily.	Number of diplomas granted for academies 1st class.		For academies 2nd class.		For Model Schools 1st class.		For Model Schools 2nd class.		For Elementary Schools 1st class.		For Elementary Schools 2nd class.		Number of candidates admitted, and classification of diplomas.				Number of candidates rejected.
				Male Teachers.	Female Teachers.	Male Teachers.	Female Teachers.	Male Teachers.	Female Teachers.	Male Teachers.	Female Teachers.	Male Teachers.	Female Teachers.	Male Teachers.	Female Teachers.	Academy.	Model School.	Elementary School.	Grand total.	
Montreal, Catholics	7	181	25					3		1		18	85	4	52		4	159	163	18
do Protestants	6	69	15	2				3	6		1	6	24	4	13	2	10	47	59	10
Quebec, Catholics	5	49	12							1				2	19		1	21	22	27
do Protestants	6	22	3									3	2	5	5			15	15	7
Three Rivers	4	59	12		2				6		1		22		15	2	7	37	46	13
Sherbrooke	4	33	10			2		1	3	2			8		16	2	6	24	32	1
Kamouraska	3	25	8										4		12			16	16	9
Gaspé	2	6	3									4		2				6	6	
Stanstead	4	51	10									6	14	6	25			51	51	
Ottawa	4	30	7.2									8		19				27	27	3
Beauce	4	23	5										9		12			21	21	2
Chicoutimi	3	10	3.1										5		2			7	7	3
Rimouski	3	14	5											1	5			6	6	8
Bonaventure	3	6	2									2	2	1	1			6	6	
Pontiac	4	17	4									2	1	7	7			17	17	
Richmond	4	33	8									1	14	5	12			32	32	1
Waterloo and Sweetsburg, Cath.	3	17	5.2									2	11		4			17	17	
do do Prot.	5	98	19.2									8	39	9	34			90	90	8
Total.	74	743	10	2	2	2	....	7	15	4	2	60	240	65	234	6	28	599	633	110

This table and a simple inspection of the registers kept by the Department prove that there is now so great a number of male and female teachers holding diplomas that every locality, even the poorest and most remote, can obtain them. A greater degree of strictness in the examinations is therefore more than ever requisite, and would be conducive to the interests of the schools and to those of the teachers themselves. To the competition of ill-qualified male or female teachers, although holders of diplomas, with competent teachers, is to be ascribed the fact that the teachers' salaries remain stationary, and in many places even decrease.

(To be continued.)

Notices of Books and Recent Publications.

FLEMING.—Report on the Intercolonial Railway Exploratory Survey, made under instructions from the Canadian Government in the year 1864. By Sandford Fleming, Civil Engineer, 160 pp., Royal 8vo, with two large maps. Desbarats, Publisher, Quebec.

This official report is printed with more than usual care, and is enriched with two well executed maps. We make the following condensed extracts:

"The main object of the Survey was to enable the Government to judge of the comparative merits of the various routes which have been proposed as well as any other routes which seemed worthy of attention and feasible for a Railway to connect the Provinces of Nova Scotia and New Brunswick with Canada.

"A railway is already in operation from Halifax, the capital of Nova Scotia, northerly to Truro, in length 16 miles; and the Canadian railway system extends to River du Loup. The portion of the contemplated Intercolonial Railway remaining to be constructed lies therefore between Truro and River du Loup.

"Having described the engineering feature of the lines recently surveyed and submitted estimates of the quantities of work considered necessary to complete the bridging and grading on each, I shall now refer to all the projected routes which seem worthy of attention, and which possibly may be found practicable on thorough surveys being made.

"I do not desire it to be understood that I now report all the lines about to be described as practicable. Some of them I believe to be practicable, but my personal knowledge of others is not sufficient to warrant me in expressing a positive opinion as to their feasibility. The lines and combinations of lines about to be referred to, are those which, from partial examination and information acquired, I think, offer a reasonable chance of being found practicable; and they are here described and classified in order that a judgment may be formed as to which route or routes may be most eligible for further surveys.

"These lines may conveniently be divided into three classes.

"First.—*Frontier Routes.*—Comprising those projected lines which, at one or more points, touch or pass close to the frontier of the United States.

"Second.—*Central Routes.*—Those lines which are projected to run through the interior and keep at some distance from the Frontier as well as from the Gulf shore.

"Third.—*Bay Chaleur Routes.*—Comprising those lines which touch the waters of the Gulf of St. Lawrence on the Bay Chaleur.

"This is the most direct line between River du Loup and the City of St. John which is likely to be found practicable. It crosses and recrosses the 'air line,' drawn from the extreme points to the north-easterly angle of Maine, no less than twelve times, and does not diverge from it at any point more than ten miles. There is, it must be confessed, some little uncertainty with regard to the feasibility of this line, between the Forks of the Miramichi and the River Tobique—as well as between the Degelé and River du Loup, these sections having been imperfectly explored; but there is good reason to expect that a careful survey would result in showing that a line not unfavorable might be had through these sections as well as elsewhere."

The cost of the section extending from Moncton to Truro, in Nova Scotia, is estimated at $5,200,000, and of that portion passing through New Brunswick and Canada (from Rivière du Loup to Apohaqui) at $15,435,500: making the total cost of the road, according to Mr. Fleming's calculation, $20,635,505, or an average cost of $45,000 per mile.

LEMAY.—*Essais Poétiques, par Léon Pamphile Lemay.* 8vo, 320 pp. $1.— 12mo. 60 cts. Desbarats, Publisher.

The public is much indebted to Mr. Desbarats for these two very fine editions of a work that must really be ranked with the best literary productions of the Old World. The uncommon talent of the author was, we believe, first noticed by *le Journal de l'Instruction Publique*, on the appearance of a poetical essay from his pen in *Le Canadien*—which essay is still one of the best, if not the best of the compositions collected in the present volume. The first poem is a translation of Longfellow's *Evangeline*, an attractive but difficult subject. The peculiar measure, the terseness of the images, the originality of form given to some of the ideas, and the touching simplicity of the narrative present almost insurmountable obstacles to the translator, and it would have been too much to expect that Mr. Lemay should have surmounted them all. We do not wish therefore to be understood as conveying any unfavorable criticism if we express our surprise at his failure to render some easy passages after he had so completely triumphed over the greatest difficulties in the work. This we can only account for on the supposition that he does not possess a perfect knowledge of English. For instance, where Gabriel and Evangeline are represented as watching the fire of the forge, the text is:

> "And as its panting ceased, and the sparks expired in the ashes,
> "Merrily laughed, and said they were nuns going into the chapel.'

Which Mr. Lemay renders thus:

> "Quand on n'entendait plus le soufflet bourdonner,
> Ni sous le dur marteau l'enclume résonner,
> Et que sous les charbons dormait la pâle flamme,
> En laissant l'atelier, sans malice dans l'âme,
> *Ils se disaient par ils aux prêtres du Seigneur*
> *Qui viennent de chanter les matines au chœur.*"

Let us hope that these blemishes may disappear in another edition. The groundwork is solid and there are very fine passages to set against these defects.

The description of Evangeline, one of the parts most difficult of rendering, is admirably imitated, except the beautiful line:

> "When she had passed, it seemed like the ceasing of exquisite music."

On the whole the tone is somewhat more solemn, and the narrative more burthened with words than in the original. The last lines are exceedingly beautiful; it would seem as if the writer had more and more identified himself with his model, and that his lyre, so long tuned in unison with that of the author of *Evangeline*, had at length borrowed its sweetest tones.

GLACKMEYER AND MACDONELL.—The Charter and By-Laws of the City of Montreal; together with Miscellaneous Acts of the Legislature relating to the City: with an Appendix. Compiled, revised and codified, by order of the City Council. By Chs. Glackmeyer,—8 vo, 526 pp. John Lovell, Montreal. Same publication in French; Louis Perrault, Printer.

This *code* of by-laws and regulations for the city of Montreal has been compiled by Mr. Glackmeyer, City Clerk, and translated into French by Mr. MacDonnell, his assistant. It will be of great service to those charged with the direction of the affairs of the city and to the citizens in general, who have often been at a loss to find the text of a by-law bearing upon any particular case. Both volumes reflect the highest credit alike upon the compilers and the publishers.

LA REVUE CANADIENNE.—The numbers for June, July and August contain the end of Mr. DeBoucherville's novel *Une de perdue deux de trouvées; Jacques et Marie*, by Mr. Bourassa—Mr. Royal in his stead contributing a monthly review; articles on the Mexican question and the St. Alban's Raid, by Mr. DeBellefeuille; the end of Rev. Mr. Ouellet's essay on Cardinal Wiseman, an article by Rev. Mr. Nantel and an Art Review by Mr. Bourassa, and finally an article on the Montreal Water Works and the most celebrated aqueducts of the Old and the New World.

CIRCULAIRE *de l'Ecole de Médecine et de Chirurgie de Montréal.* 17 pp. Plinguet & Laplante, Publishers, Montreal.

This annual, announcing the opening of the course for the 22nd year at this school, contains all the information required on the several subjects into which the classes are divided.

LEPROHON.—*Antoinette de Mirecourt, roman canadien par Madame Leprohon, traduit de l'anglais par A. Genand.*—18mo., 342 pp. Beauchemin & Valois, Montreal.

Mrs. Leprohon's book was noticed in these columns when it appeared, and we would only add now that she has been very happy in

meeting with a translator so able and conscientious as Mr. Genand has proved himself to be.

DESSAULLES. — *La guerre américaine, son origine et ses vraies causes, par l'hon. L. A. Dessaulles.*—Montreal, 1865. Office of *Le Pays.* 538 pp. in 18o.

This is a series of lectures on the civil war, and, especially, on slavery. The author, who holds strong northern views, has treated the subject with his usual ability.

LAFRANCE.—*Abrégé de grammaire française, par C. J. L. Lafrance, directeur de l'Académie Saint Jean-Baptiste.*—12-mo, 122 pp. Darveau, Quebec.

LORIMIER.—*Trois jours de fêtes littéraires, par Charles C. De Lorimier.*—Royal 8vo. 45 pp. Eusèbe Senécal, Montreal.

The pupils and former pupils of St. Mary's College, Montreal, inaugurated the new and splendid hall, under the great church now building on DeBleury street, by three consecutive sittings. Mr. De Lorimier has collected the essays and speeches delivered on those occasions, and they are now issued in a very neat pamphlet, which is embellished with a large woodcut by Walker, representing the new hall.

PARKMAN.—France and England in North America—A series of Historical narratives.—Part first.—Pioneers of France in the New World; By Francis Parkman.—Boston. 420 pp. 8vo. Little & Brown.

The gifted author of the *Conspiracy of Pontiac*, who has spent the greatest part of his life in collecting books, documents and manuscripts bearing on the early history of America, and who, like the late lamented Prescott, labours under an affliction that, to men of less energy, would seem an insuperable obstacle in the performance of such a task, has at last published the first volume of a series which will contain the results of his patient and untiring researches. During many years he has not been able, through weakness of sight, to read or to write continuously for much more than five minutes at a time and often not at all. The work now before us is divided into two parts; the first gives a graphic and thrilling account of the unsuccessful attempts at Huguenot colonization on this continent, and is entitled "Huguenots in Florida;" the second part contains a history of the discovery and first settlement of Canada, and has for its title "Champlain and his Associates."

The style of the author is most charming, giving to the entangled adventures of by-gone days all the interest and beauty of modern fiction. While the historian or rather the annalist has spared no pains to attain the most minute correctness of details, the writer has thrown over his dreary and wearisome researches, the most beautiful and glossy drapery which hides his toil and labour altogether. What a graceful romance, what a charming poem, is the first thought of the reader; but then what a patient investigation of facts, what a life of minute searching and scraping of books and of manuscripts!

Mr. Parkman is indebted to the researches of others as well as to his own labour, and in every instance he gracefully acknowledges it. Our Canadian antiquarians, Messrs. Faribault and Viger, and our Canadian writers, are duly quoted whenever he has availed himself of the historic lore accumulated through their indefatigable industry.

The many qualities which make of this work a book as pleasant to the general reader as it will be dear to the man of learning, are however marred by an unseemly weakness which we would fain pass over in silence, were it not that it would appear as a want of moral courage on our part to do so. Although the author is not without a certain liberality and fairness, he is too apt to spurn the religious convictions of others, and in doing so, he often goes so far as to sneer at things which most Christian communities have deemed sacred. There is in many cases a want of good taste in his remarks and sometimes even a want of proper feeling. We are sure for instance that the subscribers to the funds for the Propagation of the Gospel, which has its central office in London, and the association *pour la Propagation de la Foi* whose head-quarters are in Lyons, will be equally shocked at the following passage which is more in Voltaire's style than in that of a Protestant writer:

"With respect to Donnacona and his tribesmen, basely kidnapped at Stadaconé, excellent care had been taken of their souls. In due time they had been baptized and soon reaped the benefit of the rite, since they all died within a year or two, to the great detriment, as it proved, of the expedition."

BEAUMONT SMALL.—Animals of North America—2nd series—Fresh water fish; By H. Beaumont Small.—Montreal. 72 pp. 8vo. Longmoore.

Mr. Small intends to make of this a compendium of Canadian zoology. His work is dedicated, by permission, to the Montreal Game and Fish Protection Club, a useful institution whose efforts deserve much praise.

THE SATURDAY READER.—Such is the title of a valuable periodical issued by our enterprising publisher Mr. Lovell. It consists of sixteen 4th pages, printed in close type, and containing a large supply of reading matter of a sober and useful character. Price $2 yearly.

MONTHLY SUMMARY.

EDUCATIONAL INTELLIGENCE.

—The Superintendent of Education for Lower Canada having, in the course of this month, gone to Aylmer and Portage-du-Fort to inspect the registers and examination papers of the Boards of Examiners for the counties of Ottawa and Pontiac, availed himself of that opportunity to visit the schools of the two above-named places. At Aylmer he visited, with Mr. Inspector Rouleau and the Revd. Mr. Michel, the Catholic academy, conducted by Mr. Deguise, who holds a diploma from the Laval Normal school, and the girls' school conducted by Miss MacDonald, also a graduate of the same institution. Both schools have afforded ample proof of the ability and zeal of the teachers. The academy is however irregularly attended, and the rooms and school furniture are not what they ought to be. The two schools are in one building, where there is hardly sufficient space for both; but a large stone building is now being erected for the girls' school, so that the whole of the present school-house will be left to the academy. The Hon. Superintendent also visited the Protestant Academy, conducted by Mr. McOuat, B. A. of McGill College, who also holds an Academy diploma from the McGill Normal school, obtained at the close of last session. Mr. McOuat enters on his new duties with a good will and every required qualification. All this, however, will be of little avail if the pupils are not sent regularly to school, or if they are allowed to disregard the efforts made by their worthy teacher as some among them appear to have done. The special grants to such institutions are the occasion of much competition on the part of the several counties, and parties who wish to retain them must be made to understand that unless they give some kind of return for the liberality of the government, the boon will be transferred to other places. It is therefore to be hoped that some efforts will be made on behalf of both the Protestant and Catholic academies. The teachers are competent and the matter will rest with the parents and rate-payers. At Portage-du-Fort the Superintendent visited the common school, which is attended by Protestant and by Catholic children, and which is well conducted by Mr. Beer. He was accompanied by O. Leblanc, Esquire, secretary of the Board of Examiners, and by the School Commissioners. The school is well attended, but there are few French pupils and the French language is not taught. In the evening, the Superintendent, on the invitation of the School Commissioners, lectured in the Town hall, in French and in English, to a numerous audience, reviewing the whole of the educational laws and commenting on various educational topics of a practical nature. After the lectures were over a vote of thanks was moved by the Revd. Mr. Kiernan, seconded by Dr. Purvis and carried. A full account of the proceedings appeared in the *Pontiac Pioneer* of the 22nd of September.

STATISTICAL INTELLIGENCE.

—If the following account is true, London is no longer the metropolis of our planet. That distinction belongs to the Japanese city of Jeddo, which a correspondent of the *Boston Traveller* thus describes:

"But what shall I say of this greatest and most singular of all cities? A volume is needed to describe it without attempting to give its history. I have read of old Ninevah and Babylon below the ground, and seen and handled the works of art which have been disinterred, and created so much admiration on both sides of the Atlantic; but one living Jeddo above the ground is worth a hundred old fogy cities below it. I cannot give you an idea of it, it is so unique, so unlike everything except itself, and so impossible, as you will think.

"I have seen several places of interest, and maintained a cool head, but I was bewildered and confounded when I saw this. It is situated on the western shore of this charming gulf, twenty miles wide by twenty-four long, to which the Lake Tiberias is nothing, except in the sacred feet which once trod its shores. It stretches for twenty miles or more along a beach of a semi-circular form, with its horns turned outward, and along which a street extends, crowded with blocks of stores and houses, and teeming with moving crowds, while shop-keepers, artisans, women and children seem equally numerous within doors and at the doors. Indeed,

a dozen or fifteen mil[illegible] might be added to the city in this direction, since there is nothing but an unbroken succession of towns and villages for this distance, which are as populous and well-built as the city itself.

"In crossing the city from the shore to the western outskirts I have walked two miles and a half, and then proceeded on horseback for ten miles further, making twelve miles and a half, while in other places it may be wider. According to the lowest estimate, the city covers an area equal to seven of the New England farming towns, which are usually six miles square. And all is traversed by streets, usually wide, well constructed, perfectly neat, and crossing each other at right angles; streets lined with houses and stores as compactly as they can be built, and crowded with moving and stationary masses, as thick as in Washington street, or New York Broadway, at least for considerable distances. The population is estimated generally at three millions, which Mr. Harris, our minister, thinks is no exaggeration. For my part, judging from what I have seen when I have gone into the heart of the city, and crossed the city from side to side, I should be willing to add as many millions more; for the living, moving masses, seen from sunrise to sunset, and everywhere the same, fairly seemed beyond computation."

— The following interesting items are from Mr. Roswag's new work on the subject entitled *Les Métaux Précieux*. From the year 1500 to 1848 America yielded 27,122 millions of francs in silver, and 10,028 millions of francs in gold. These numbers comprise 13,774 millions of silver drawn from Mexico, 43,059 from Peru and Bolivia, 230 from Chili, and 58 from New Granada. As to gold, the share of Brazil was 4,625 millions of francs; that of Granada, 1,952; of Mexico, 1,341; of Peru and Bolivia, 1,171; of Chili, 862; and of the United States, 76. Europe during the same period only produced 2,330 millions of francs in silver, and 1,600 ditto in gold. Africa yielded 2,500 millions from Guinea. Hence the total quantity of precious metals existing in 1848, including 1,000 millions supposed to exist before 1500, formed a total of 44,578 millions of francs—viz., silver, 30,152, and gold, 14,426. From 1848 to 1857 the stock of precious metals has been increased by 2,170 millions of francs of silver, and 6,004 of gold. Of the latter, California has produced 2,508 millions, and the rest of America 445. Australia has yielded 1,695, and Europe 743, including Russia for 678 millions. Asia has contributed 505 millions, and Africa 108. Of silver, Australia has yielded 9 millions; America, 1,827; Europe, 321; and Asia, 22; forming a total of 2,179 millions of francs. There consequently exist at present in the world 32,331 millions of francs of silver, and 20,430 of gold. The ratio of gold to silver, which before 1848 was as 1 to 2, is now as 2 to 3. In weight there existed before 1848 about 31 kilogrammes of silver for every kilogramme of gold; in 1856 this proportion had fallen to less than 24 kilogrammes of silver for one kilogramme of gold. Since 1856 the total annual increase of the precious metals may be stated at 240 millions of francs of silver, and 500 of gold, being more than double the former.

— The growth of the population of the British Islands during the last one hundred and fifty years is prodigious. The surplus has furnished the great majority of the population of British America, Australia, and the United States. Great Britain and Ireland have furnished upwards of 30,000,000, of people to these countries, and yet the home population, which was in the year 1700, only 7,650,000, and in 1800, only 15,800,000, is now upwards of 30,000,000. The British Islands have doubled their population twice in one hundred and sixty-five years. France in the year 1700 contained 19,669,000 inhabitants, in 1800, 27,349,000, and in 1860, 37,000,000—so that her population has not doubled once during the same one hundred and sixty years, although she has done but little in the way of colonization. The other European States show but a very slow rate of increase; in fact, we believe that one or two of them remain in *statu quo*.

— From returns of the Registrar General, in the middle of the present year, the population of the following towns were:—London, 3,015,494; Liverpool, 476,368; Manchester, 354,930; Salford, 110,833; Birmingham, 327,842; Leeds, 224,025; Bristol, 161,809; Edinburgh, 174,180; Glasgow, 423,723; Dublin, 317,666.

NECROLOGICAL INTELLIGENCE.

— Rev. Mr. Faucher, who died recently at Lotbinière, was one of the oldest *curés* of the District of Quebec and a most zealous friend of the cause of Education. He was the founder of the Lotbinière Academy, a very successful and well managed school.

— Death is very busy with our veteran politicians just now. Mr. Notman has just been laid in the grave, and now we are called to mourn the decease of the Hon. James Morris, one of the oldest and prominent Reformers in the Upper Province. Mr. Morris was seized with paralysis some years ago, and though he recovered from the worst effects of the stroke, he never became strong, and has for some time been laid aside from public duty. Two days ago the members of his family were summoned to his bedside, and yesterday evening he breathed his last. Mr. Morris was born in Paisley, Scotland, in 1798, and was consequently only 67 when he died. His father, Mr. Alexander Morris, emigrated to Canada in 1801 with his family, and became a resident first of Montreal, and afterwards of the township of Elizabethtown. James Morris was educated at Sorel, by Mr. Nelson, father of the late Dr. Wolfred Nelson, of Montreal, and became a merchant in Brockville, in which occupation he amassed considerable wealth. He was brought very prominently into public life by the Clergy Reserve struggle, and was elected to the Upper Canada Parliament in July, 1837, for the county of Leeds. He was again elected for Leeds to the Parliament of the United Provinces, and in 1844 was called to the Legislative Council, and has since been, until lately, one of the most prominent members of that body. In 1851, when the charge of the Post Office was transferred from the Imperial to the Provincial authorities, Mr Morris was appointed Postmaster General, with a seat in the Cabinet; and his admirable habits of business and desire for economy, did great service in the organization of the new system. He arranged a postal treaty with the United States, and introduced the uniform rate of five cents letter postage now existing. In 1853, Mr. Morris resigned his office of Postmaster General, and became Speaker of the Council, and in the following year went out of office at the fall of the Hincks-Morin Government. From 1854 to 1858, he led the Opposition in the Upper House, and was appointed Speaker when the Brown-Dorion Government took office in that year.

Mr. Morris was possessed of great shrewdness, tact, and knowledge of affairs; he was kind and conciliatory in his manner; and in all his public actions was animated by an anxious desire to serve his country. He was a steady, consistent member of the Reform party, and will long be remembered as a prominent participant in its trials and triumphs during a period of more than thirty years.—*Toronto Globe.*

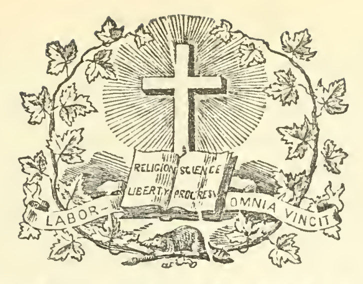
— All lovers of genuine humor will have heard of the death of the author of Sam Slick with regret. Mr. Haliburton had fixed his residence in England some years ago, and had entered the political arena there, but except as the champion of the British North American colonies, he had never risen to a very prominent position in the Imperial Parliament. He was the son of Judge Haliburton and was born at Windsor, Nova Scotia, in 1796. Having completed his studies at King's College, he was successively admitted to the bar, appointed a judge while still comparatively young, and promoted to the Chief Justiceship of Nova Scotia. His reputation as an author is due to his celebrated delineation of Yankee character, *Sam Slick, the Clockmaker*, which first appeared in a local newspaper and met with great success in the United States and also in England, where it was published in book form, and finally passed through several editions in both hemispheres. *The Attaché, or Sam Slick in England*, published after his visit to Britain in 1842, a *History of Nova Scotia*, in two volumes, and several humoristic works and political pamphlets followed his first and most successful literary effort. The most remarkable among the publications here alluded to, are *Bubbles of Canada*, *The Old Judge*, and *Natur' and Human Natur.'* In the year 1858, the University of Oxford conferred upon him the hononary degree of Doctor.

MISCELLANEOUS INTELLIGENCE.

— About the year 1794, there was a man living in Providence named Elijah Ormsbee. He was born in Rehoboth, but had worked for a season near Albany. While there, his observation of the difficulty of navigating the Hudson by sails alone, led him to think of steam as a propelling power. While employed at Cranston, repairing a large steam engine employed for pumping water from an ore bed, he was called on by David Wilkinson, and communicated to him the idea of a steamboat. He offered to furnish the boat, provided Mr. Wilkinson would provide the engine. The proposition was accepted. Mr. Wilkinson went home, made his patterns, cast and bored the cylinders, suggested two plans of paddles, and the boat was finished. At a retired place called Winsor's Grove, about three miles and a half from Providence, Ormsbee completed his arrangements, and, on one pleasant evening, made his first trip to Providence. On the following day, he went in his steamboat to Pawtucket to show her to his friends, and the two ingenious mechanics exhibited her between the two bridges. "After our frolic was over," says Mr. Wilkinson in writing of the matter more than half a century afterwards, "being short of funds, we hauled the boat up and gave it over."

It is fair to claim that had the Pawtucket been a larger stream, so that steam had been as important for it as for the Hudson, or had some discerning capitalist been ready to afford the pecuniary aid needful for testing and perfecting the invention, the chaplet that adorned the head of Fulton might have been woven over the brows of Wilkinson and Ormsbee, and the Pawtucket river and Narragansett bay would have had an additional claim to fame.—*Centennial Address, North Providence.*

EUSÈBE SENÉCAL, *Caloric Printing Presses*, 10, *St. Vincent Street, Montreal.*



JOURNAL OF EDUCATION.

Volume IX. Montreal (Lower Canada), October and November, 1865. Nos. 10 and 11.

LITERATURE.

POETRY.

(Written for the *Journal of Education.*)

THE FALLING LEAVES.

BY MRS. LEPROHON.

Oh fading, fallen leaves,
Strewing each lonely forest dell,
Our crowded city paths as well,
Thickly as autumn sheaves.

Whilst rustling 'neath my feet,
I think of ye in freshness green,
In summer's glorious satin sheen,
Giving shade—fragrance sweet.

When broke the summer dawn,
Whilst flooded in that rosy light,
Studded with diamond dew drops bright,
How fair to look upon!

Fair too at evening hour,
When silver moonbeams flick'ring played,
Between, around, in light and shade,
A soft, translucent shower.

And, oh, the long bright days,
When hum of bee and bird's sweet song
Trilled 'midst your shade, the whole day long,
Nature's sweet hymn of praise.

Recalling freshness fled,
And seeing now how low ye lie,
Trampled in mire by passers-by,
I mourn your beauty dead.

And, yet, why should I grieve?
Ye did your part, gave beauty — cheer —
Unto a season of the year,
And now fair life ye leave.

E'en so, let us not mourn,
When our life's changeful season past,
Shall come that sentence stern, at last,
" Dust to dust return."

GROWING OLD.

Touch us, oh, Time! with light hand as you pass,
Tempt us to think it a loving caress;
Tread on our hearts, too, with reverent care —
Crush not the flowers of life blooming there;
Furrow our foreheads with care if you will,
But let youth linger within our hearts still.

'Mid dark tresses are fibres of gray —
Silent reminders of life's fleeting day;
And when we turn to the shadowy past,
On its bright altars lay ashes and dust;
All its fair idols are marked with decay —
All its sweet pictures are faded away.

Sadly ye look for the friends of the past —
They of strong heart and the beautiful trust;
Some we find sleeping beneath sculptured stone;
Some toiling wearily onward alone;
Some thro' ambition grown heartless and cold,
But one and all, save the dead, growing old.

Oft we grow weary in watching in vain
O'er hopes that always but shadows remain;
Weary of counting the joys that have died;
Weary of leaving bright visions aside;
Weary of taking but dross for pure gold;
Weary, so weary, of hearts growing old.

Chase from us, Time, all shadowy fears;
Lift from our lives the slow burden of years;
Shadow our foreheads and silver our hair,
But oh, shield our hearts from the furrows of care.
Let not the heart e'er grow selfish or cold,
And we shall no longer fear to grow old.

LINES TO DU PERRIER ON THE DEATH OF HIS DAUGHTER.

FROM THE FRENCH OF MALHERBE.

Thy grief, Du Perrier, will it ne'er depart?
And shall the words of woe
Paternal love is whisp'ring to thy heart
For ever make it flow?

Thy daughter's fate, in sinking' mid the dead—
The lot in store for all—
Is it some maze, wherein thy reason, fled,
Is lost for evermore?

I know what charms were spread about her youth,
Nor hath it been my aim,
My injur'd friend, the fatal blow to soothe,
By weakening her fame.

But she was of that world, whose brightest flow'rs
To saddest fate are born;
A rose, she number'd all a rose's hours,
The space of one bright morn.

Oh! Death hath rigours beyond all compare,
To pray to her is vain;
The cruel sprite is deaf to all our care,
She heeds no cry of pain.

The poor man in his hut, whate'er his state,
Must meet the dart she flings;
And sentries watching at the palace gate
Cannot defend our kings.

THE WITHERED LEAF.

(From the French of A. V. Arnault.)

" De ta tige détachée."

From thy branchlet torn away,
Whither, whither dost thou stray,
Poor dry leaf?—I cannot say.
Late, the tempest struck the oak
Which was hitherto my stay.
Ever since that fatal stroke,
To the faithless winds a prey,
Not a moment's rest I gain.
From the forest to the plain,
Without fear or show of pain,
I am carried by the gale.
Yet I only go the way
That the rose-leaf shuns in vain,
And where laurel-leaves grow pale.

Mascouche, July, 1865. J. R.

CANADIAN HISTORY

Champlain on the Ottawa. (1)

The arrangements just indicated were a work of time. In the summer of 1612, Champlain was forced to forego his yearly voyage to New France; nor, even in the following spring, were his labors finished and the rival interests brought to harmony. Meanwhile, incidents occurred destined to have no small influence on his movements. Three years before, after his second fight with the Iroquois, a young man of his company had boldly volunteered to join the Indians on their homeward journey and winter among them. Champlain gladly assented, and in the following summer, the adventurer returned. Another young man, one Nicholas de Vignan, next offered himself; and he, also, embarking in the Algonquin canoes, passed up the Ottawa and was seen no more for a twelvemonth. In 1612 he reappeared in Paris, bringing a tale of wonders; for, says Champlain, " he was the most impudent liar that has been seen for many a day." He averred that at the sources of the Ottawa he had found a great lake; that he had crossed it, and discovered a river flowing northward; that he had descended this river, and reached the shores of the sea; that here he had seen the wreck of an English ship, whose crew, escaping to land, had been killed by the Indians; and that this sea was distant from Montreal only seventeen days by canoe. The clearness, consistency, and apparent simplicity of his story deceived Champlain, who had heard of a voyage of the English to the northern seas, coupled with rumors of wreck and disaster, (1) and was thus confirmed in his belief of Vignan's honesty. The Maréchal de Brissac, the President Jeannin, and other persons of eminence about the court, greatly interested by these dexterous fabrications, urged Champlain to follow up without delay a discovery which promised results so important; while he, with the Pacific, Japan, China, the Spice Islands, and India stretching in flattering vista before his fancy, entered with eagerness on the chase of this illusion. Early in the spring of 1613, the unwearied voyager crossed the Atlantic, and sailed up the St. Lawrence. On Monday, the twenty-seventh of May, he left the island of St. Helen, opposite Montreal, with four Frenchmen, one of whom was Nicholas de Vignan, and one Indian, in two small canoes. They passed the swift current at St. Ann's, crossed the Lake of Two Mountains, and advanced up the Ottawa till the rapids of Carillon and the Long Saut checked their course. So dense and tangled was the forest, that they were forced to remain in the bed of the river, trailing their canoes along the bank with cords, or pushing them by main force up the current. Champlain's foot slipped; he fell in the rapids, two boulders against which he braced himself saving him from being swept down, while the cord of the canoe, twisted round his hand, nearly severed it. At length they reached smoother water, and presently met fifteen canoes of friendly Indians. Champlain gave them the most awkward of his Frenchmen and took one of their number in return,—an exchange greatly to his profit.

All day they plied their paddles. Night came, and they made their camp-fire in the forest. He who now, when two centuries and a half are passed, would see the evening bivouac of Champlain, has but to encamp, with Indian guides, on the upper waters of this same Ottawa,—to this day a solitude,—or on the borders of some lonely river of New Brunswick or of Maine.

As, crackling in the forest stillness, the flame cast its keen red light around, wild forms stood forth against the outer gloom;—the strong, the weak, the old, the young; all the leafy host of the wilderness; moss-bearded ancients tottering to their death, saplings slender and smooth, trunks hideous with wens and goitress and strange deformity; the oak, a giant in rusty mail; the Atlantean column of the pine, bearing on high its murmuring world of verdure; the birch, ghastly and wan, a spectre in the darkness; and, aloft, the knotted boughs, uncouth, distorted shapes struggling amid dim clouds of foliage.

The voyagers gathered around the flame, the red men and the white, these cross-legged on the earth, those crouching like apes, each feature painted in fiery light as they waited their evening meal,—trout and perch on forked sticks before the scorching blaze. Then each spread his couch— boughs of the spruce, hemlock, balsam-fir, or pine — and stretched himself to rest. Perhaps, as the night wore on, chilled by the river-damps, some slumberer woke, rose, kneeled by the sunken fire, spread his numbed hands over the dull embers, and stirred them with a half-consumed brand. Then the sparks, streaming upward, roamed like fire-flies among the dusky boughs. The scared owl screamed,

(1) A chapter from Mr. Parkman's new work, of which a notice appeared in our last number. It will derive additional interest from the fact that the seat of government is now established at Ottawa. Champlain never dreamt that near these wonderful falls of *the kettles*, where an offering of tobacco was made to the *manitou* of the place, a city would be built that, two hundred and fifty years afterwards, should deprive his own dear Quebec of the metropolitan honors.

(1) Evidently the voyage of Henry Hudson in 1610-12, when that voyager, after discovering Hudson's Strait, lost his life through a mutiny. Compare Jérémie, *Relation*, in *Recueil de Voyages au Nord*, VI.

and the watcher turned quick glances into the dark, lest, from those caverns of gloom, the lurking savage might leap upon his defenceless vigil. As he lay once more by the replenished fire, sounds stole upon his ear, faint, mysterious, startling to the awakened fancy,—the whispering fall of a leaf, the creaking of a bough, the stir of some night insect, the soft footfall of some prowling beast. from the far-off shore the mournful howl of a lonely wolf, or the leaping of a fish where, athwart the pines, the weird moon gleamed on the midnight river.

Day dawned. The east glowed with tranquil fire, that pierced, with eyes of flame, the fir-trees whose jagged tops stood drawn in black against the burning heaven. Beneath, the glossy river slept in shadow, or spread far and wide in sheets of burnished bronze; and, in the western sky, the white moon hung like a disk of silver. Now, a fervid light touched the dead top of the hemlock, and now, creeping downward, it bathed the mossy beard of the patriarchal cedar, unstirred in the breathless air. Now, a fiercer spark beamed from the east; and, now, half risen on the sight, a dome of crimson fire, the sun blazed with floods of radiance across the awakened wilderness.

The paddles flashed; the voyagers held their course. And soon the still surface was flecked with spots of foam; islets of froth floated by, tokens of some great convulsion. Then, on their left, the falling curtain of the Rideau shone like silver betwixt its bordering woods, and in front, white as a snow-drift, the cataracts of the Chaudière barred their way. They saw the dark cliffs, gloomy with impending firs, and the darker torrent, rolling its mad surges along the gulf between. They saw the unbridled river careering down its sheeted rocks, foaming in unfathomed chasms, wearing the solitude with the hoarse outcry of its agony and rage.

On the brink of the rocky basin where the plunging torrent boiled like a caldron, and puffs of spray sprang out from its concussion like smoke from the throat of a canon,—here Champlain's two Indians took their stand, and, with a loud invocation, threw tobacco in the foam, an offering to the local spirit, the Manitou of the cataract. (1)

Over the rocks, through the woods; then they launched their canoes again, and, with toil and struggle, made their amphibious way, now pushing, now dragging, now lifting, now paddling, now shoving with poles. When the evening sun poured its level rays across the quiet Lake of the Chaudière, they landed, and made their peaceful camp on the verge of a woody island.

Day by day brought a renewal of their toils. Hour by hour, they moved prosperously up the long winding of the solitary stream; then, in quick succession, rapid followed rapid, till the bed of the Ottawa seemed a slope of foam. Now, like a wall bristling at the top with woody islets, the Falls of the Chats faced them with the sheer plunge of their sixteen cataracts. Now they glided beneath overhanging cliffs, where, seeing but unseen, the crouched wild-cat eyed them from the thicket; now through the maze of water-girded rocks, which the white cedar and spruce clasped with serpent-like roots, or among islands where old hemlocks, dead at the top, darkened the water with deep green shadow. Here, too, the rock-maple reared its verdant masses, the beech its glistening leaves and clean, smooth stem, and behind, stiff and sombre, rose the balsam-fir. Here, in the tortuous channels, the muskrat swam and plunged, and the splashing wild duck dived beneath the alders or among the red and matted roots of thirsty water-willows. Aloft, the white pine towered " proudly eminent" above a sea of verdure. Old fir-trees, hoary and grim, shaggy with pendent mosses, leaned above the stream, and beneath, dead and submerged, some fallen oak thrust from the current its bare, bleached limbs, like the skeleton of a drowned giant. In the weedy cove stood the moose, neck-deep in water to escape the flies, wading shoreward, with glistening sides, as the canoes drew near, shaking his broad antlers and writhing his hideous nostril, as with clumsy trot he vanished in the woods.

In these ancient wilds, to whose ever verdant antiquity the pyramids are young and Nineveh a mushroom of yesterday; where the sage wanderer of the Odyssey, could he have urged his pilgrimage so far, would have surveyed the same grand and stern monotony, the same dark sweep of melancholy woods; and where, as of yore, the bear and the wolf still lurk in the thicket, and the lynx glares from the leafy bough;—here, while New England was a solitude, and the settlers of Virginia scarcely dared venture inland beyond the sound of cannon-shot, Champlain was planting on shores and islands the emblems of his Faith. (1) Of the pioneers of the North American forest, his name stands foremost on the list. It was he who struck the deepest and boldest strokes into the heart of their pristine barbarism. At Chantilly, at Fontainebleau, at Paris, in the cabinets of princes and of royalty itself, mingling with the proud vanities of the court; then lost from sight in the depths of Canada, the companion of savages, sharer of their toils, privations, and battles, more hardy, patient, and bold than they;—such, for successive years, were the alternations of this man's life.

To follow on his trail once more. His Indians said that the rapids of the river above were impassable. Nicholas de Vignau affirmed the contrary; but from the first, Vignau had been found always in the wrong. His aim seems to have been to involve his leader in difficulties, and disgust him with a journey which must soon result in exposing the imposture which had occasioned it. Champlain took the counsel of the Indians. The party left the river, and entered the forest.

Each Indian shouldered a canoe. The Frenchmen carried the baggage, paddles, arms, and fishing-nets. Champlain's share was three paddles, three arquebuses, his capote, and various "*bagatelles.*" Thus they struggled on, till, at night, tired and half starved, they built their fire on the border of a lake, doubtless an expansion of the river. Here, clouds of mosquitoes gave them no peace, and piling decayed wood on the flame, they sat to leeward in the smoke. Their march, in the morning, was through a pine forest. A whirlwind had swept it, and in the track of the tornado the trees lay uptorn, inverted, prostrate, and flung in disordered heaps, boughs, roots, and trunks mixed in wild confusion. Over, under, and through these masses the travellers made their painful way; then through the pitfalls and impediments of the living forest, till a sunny transparency in the screen of young foliage before them gladdened their eyes with the assurance that they had reached again the banks of the open stream.

At the point where they issued it could no longer be called a stream, for it was that broad expansion now known as Lake Coulange. Below, were the dangerous rapids of the Calumet; above, the river was split into two arms, folding in their watery embrace the large island called Isle des Allumettes. This neighborhood was the seat of the principal Indian population of the river, ancestors of the modern Ottawas; (2) and, as the canoes

(1) An invariable custom with the upper Indians on passing this place. When many were present, it was attended with solemn dances and speeches, a contribution of tobacco being first taken on a dish. It was thought to insure a safe voyage; but was often an occasion of disaster, since hostile war-parties, lying in ambush at the spot, would surprise and kill the votaries of the Manitou in the very presence of their guardian.

(1) They were large crosses of white cedar, placed at various points along the river.

(2) Usually called Algoumequins, or Algonquins, by Champlain and other early writers,—a name now always used in a generic sense to designate a large family of cognate tribes, speaking languages radically similar, and covering a vast extent of country. The Ottawas, however, soon became known by their tribal name, written in various forms by French and English writers, as *Outouais, Outaouaks, Tawaas, Oadauwaus, Outavies, Outaouacs, Utawas, Ottawwawwug, Outtaaets, Outtawaats, Attawawas.* The French nicknamed them "*Cheveux Relevés,*" from their mode of wearing their hair. Champlain gives the same name to a tribe near Lake Huron.

The Ottawas or Algonquins of the Isle des Allumettes and its neighborhood are most frequently mentioned by the early writers as *la Nation de l'Isle.* Lalemant (*Relation des Hurons,* 1639) calls them *Ehonkeronons.* Vimont (*Relation,* 1640) calls them *Kichesipirini.* The name *Algonquin* was used generally as early as the time of Sagard, whose *Histoire du Canada* appeared in 1636. Champlain always limits it to the tribes of the Ottawa.

advanced, unwonted signs of human life could be seen on the borders of the lake. Here was a rough clearing. The trees had been burned; there was a rude and desolate gap in the sombre green of the pine forest. Dead trunks, blasted and black with fire, stood grimly upright amid the charred stumps and prostrate bodies of comrades half consumed. In the intervening spaces, the soil had been feebly scratched with hoes of wood or bone, and a crop of maize was growing, now some four inches high. (1) The dwellings of these slovenly farmers, framed of poles covered with sheets of bark, were scattered here and there, singly or in groups, while their tenants were running to the shore in amazement. Warriors stood with their hands over their mouths,—the usual Indian attitude of astonishment; squaws stared betwixt curiosity and fear; naked pappooses screamed and ran. The chief, Nibachis, offered the calumet, then harangued the crowd: "These whitemen must have fallen from the clouds. How else could they have reached us through the woods and rapids which even we find it hard to pass? The French chief can do anything. All we have heard of him must be true." And they hastened to regale the hungry visitors with a repast of fish.

Champlain asked for guidance to the settlements above. It was readily granted. Escorted by his friendly hosts, he advanced beyond the head of Lake Coulange, and, landing, saw the unaccustomed sight of pathways through the forest. They led to the clearings and cabins of a chief named Tessouat, who, amazed at the apparition of the white strangers, exclaimed that he must be in a dream. (2) Next, the voyagers crossed to the neighboring island, then deeply wooded with pine, elm, and oak. Here were more desolate clearings, more rude cornfields and bark-build cabins. Here, too, was a cemetry, which excited the wonder of Champlain, for the dead were better cared for than the living. Over each grave a flat tablet of wood was supported on posts, and at one end stood an upright tablet, carved with an intended representation of the features of the deceased. If a chief, the head was adorned with a plume. If a warrior, there were figures near it of a shield, a lance, a war-club, and a bow and arrows; if a boy, of a small bow and one arrow; and if a woman or a girl, of a kettle, an earthen pot, a wooden spoon, and a paddle. The whole was decorated with red and yellow paint; and beneath slept the departed, wrapped in a robe of skins, his earthly treasures about him, ready for use in the land of souls.

Tessouat was to give a *tabagie*, or solemn feast, in honor of Champlain, and the chiefs and elders of the island were invited. Runners were sent to summon the guests from neighboring hamlets; and, on the morrow, Tessouat's squaws swept his cabin for the festivity. Then Champlain and his Frenchmen were seated on skins in the place of honor, and the naked guests appeared in quick succession, each with his wooden dish and spoon, and each ejaculating his guttural salute as he stooped at the low door. The spacious cabin was full. The congregated wisdom and prowess of the nation sat expectant on the bare earth. Each long, bare arm thrust forth its dish in turn as the host served out the banquet, in which, as courtesy enjoined, he himself was to have no share. First, a mess of pounded maize wherein were boiled, without salt, morsels of fish and dark scraps of meat; then, fish and flesh broiled on the embers, with a kettle of cold water from the river. Champlain, in wise distrust of Ottawa cookery, confined himself to the simpler and less doubtful viands. A few minutes, and all alike had vanished. The kettles were empty. Then pipes were filled and touched with fire brought in by the duteous squaws, while the young men who had stood thronged about the entrance now modestly withdrew, and the door was closed for counsel. (1)

First, the pipes were passed to Champlain. Then, for full half an hour, the assembly smoked in silence. At length, when the fitting time was come, he addressed them in a speech in which he declared, that, moved by affection, he visited their country to see its richness and its beauty, and to aid them in their wars; and he now begged them to furnish him with four canoes and eight men, to convey him to the country of the Nipissings, a tribe dwelling northward on the lake which bears their name. (2)

His audience looked grave, for they were but cold and jealous friends of the Nipissings. For a time they discoursed in murmuring tones among themselves, all smoking meanwhile with redoubled vigor. Then Tessouat, chief of these forest republicans, rose and spoke in behalf of all.

"We always knew you for our best friend among the Frenchmen. We love you like our own children. But why did you break your word with us last year when we all went down to meet you at Montreal to give you presents and go with you to war? You were not there, but other Frenchmen were there who abused us. We will never go again. As for the four canoes, you shall have them if you insist upon it; but it grieves us to think of the hardships you must endure. The Nipissings have weak hearts. They are good for nothing in war, but they kill us with charms, and they poison us. Therefore we are on bad terms with them. They will kill you, too."

Such was the pith of Tessouat's discourse, and at each clause, the conclave responded in unison with an approving grunt.

Champlain urged his petition; sought to relieve their tender scruples in his behalf; assured them that he was charm-proof, and that he feared no hardships. At length he gained his point. The canoes and the men were promised, and, seeing himself as he thought on the highway to his phantom Northern Sea, he left his entertainers to their pipes, and with a light heart issued from the close and smoky den to breathe the fresh air of the afternoon. He visited the Indian fields, with their young crops of pumpkins, beans, and French peas,—the last a novelty obtained from the traders. (3) Here, Thomas, the interpreter, soon joined him with a countenance of ill news. In the absence of Champlain, the assembly had reconsidered their assent. The canoes were denied.

With a troubled mind he hastened again to the hall of council, and addressed the naked senate in terms better suited to his exigencies than to their dignity.

"I thought you were men; I thought you would hold fast to

As the Ottawas were at first called Algonquin, so all the Algonquin tribes of the Great Lakes were afterwards, without distinction, called Ottawas, because the latter had first become known to the French. Dablon, *Relation*, 1670, c. X.

Isle des Allumettes was called also Isle du Borgne, from a renowned one-eyed chief who made his abode here, and who, after greatly exasperating the Jesuits by his evil courses, at last became a convert and died in the Faith. They regarded the people of this island as the haughtiest of all the tribes. Le Jeune, *Relation*, 1636, 230.

(1) Champlain, *Quatriesme Voyage*, 29. This a pamphlet of fifty-two pages, containing the journal of his voyage of 1613, and apparently published at the close of that year.

(2) Tessouat's village seems to have been on the Lower Lake des Allumettes, a wide expansion of that arm of the Ottawa which flows along the southern side of Isle des Allumettes. Champlain is clearly wrong, by one degree, in his reckoning of the latitude,—47° for 46°. Tessouat was father, or predecessor, of the chief Le Borgne, whose Indian name was the same. See note, *ante*, p. 347.

(1) Champlain's account of this feast (*Quatriesme Voyage*, 32) is unusually minute and graphic. In every particular—excepting the pounded maize—it might, as the writer can attest, be taken as the description of a similar feast among some of the tribes of the Far West at the present day, as, for example, one of the remoter bands of the Dacotah, a race radically distinct from the Algonquin.

(2) The *Nebecerini* of Champlain, called also *Nipissingues*, *Nipissiriniens*. *Nibissiriens*, *Bissiriniens*, *Epiciriniens*, by various early French writers. They are the *Askikouanheronons* of Lalemant, who borrowed the name from the Huron tongue, and were also called *Sorciers* from their ill repute as magicians.

They belonged, like the Ottawas, to the great Algonquin family, and are considered by Charlevoix (*Journal Historique*, 186) as alone preserving the original type of that race and language. They had, however, borrowed certain usages from their Huron neighbors.

(3) "Pour passer le reste du jour, je fus me pourmener par les jardins, qui n'étoient remplis que de quelques citrouilles, phasioles, et de nos pois, qu'ils commencent à cultiver, où Thomas, mon truchement, qui entendoit fort bien la langue, me vint trouver," etc.—*Champlain*, (1632,) l. IV. c. II.

your word: but I find you children, without truth. You call yourselves my friends, yet you break faith with me. Still I would not incommode you; and if you cannot give me four canoes, two will serve." (1)

The burden of the reply was, rapids, rocks, cataracts, and the wickedness of the Nipissings.

"This young man," rejoined Champlain, pointing to Vignan, who sat by his side, "has been to their country, and did not find the road or the people so bad as you have said."

"Nicholas," demanded Tessouat, "did you say that you had been to the Nipissings?"

The impostor sat mute for a time, then replied,—

"Yes, I have been there."

Hereupon an outcry broke forth from the assembly, and their small, deep-set eyes were turned on him askance, "as if," says Champlain, "they would have torn and eaten him."

"You are a liar," returned the unceremonious host; "you know very well that you slept here among my children every night and rose again every morning; and if you ever went where you pretend to have gone, it must have been when you were asleep. How can you be so impudent as to lie to your chief, and so wicked as to risk his life among so many dangers? He ought to kill you with tortures worse than those with which we kill our enemies." (2)

Champlain urged him to reply, but he sat motionless and dumb. Then he led him from the cabin and conjured him to declare if, in truth, he had seen this sea of the North. Vignan, with oaths, affirmed that all he had said was true. Returning to the council, Champlain repeated his story: how he had seen the sea, the wreck of an English ship, eighty English scalps, and an English boy, prisoner among the Indians.

At this, an outcry rose, louder than before.

"You are a liar." "Which way did you go?" "By what rivers?" "By what lakes?" "Who went with you?"

Vignan had made a map of his travels, which Champlain now produced, desiring him to explain it to his questioners; but his assurance had failed him, and he could not utter a word.

Champlain was greatly agitated. His hopes and heart were in the enterprise; his reputation was in a measure at stake; and now, when he thought his triumph so near, he shrank from believing himself the sport of an impudent impostor. The council broke up; the Indians displeased and moody, and he, on his part, full of anxieties and doubts. At length, one of the canoes being ready for departure, the time of decision came, and he called Vignan before him.

"If you have deceived me, confess it now, and the past shall be forgotten. But if you persist, you will soon be discovered, and then you shall be hanged."

Vignan pondered for a moment; then fell on his knees, owned his treachery, and begged for mercy. Champlain broke into a rage, and, unable, as he says, to endure the sight of him, ordered him from his presence, and sent the interpreter after him to make further examination. Vanity, the love of notoriety, and the hope of reward, seem to have been his inducements; for he had, in truth, spent a quiet winter in Tessouat's cabin, his nearest approach to the Northern Sea; and he had flattered himself that he might escape the necessity of guiding his commander to this pretended discovery. The Indians were somewhat exultant. "Why did you not listen to chiefs and warriors, instead of believing the lies of this fellow?" And they counselled Champlain to have him killed at once, adding that they would save their friends trouble by taking that office upon themselves.

No motive remaining for farther advance, the party set forth on their return, attended by a fleet of forty canoes bound to Montreal (1) for trade. They passed the perilous rapids of the Calumet, and were one night encamped on an island, when an Indian, slumbering in an uneasy posture, was visited with a nightmare. He leaped up with a yell, screamed that somebody was killing him, and ran for refuge into the river. Instantly all his companions were on their feet, and hearing in fancy the Iroquois war-whoop, they took to the water, splashing, diving, and wading up to their necks in the blindness of their fright. Champlain and his Frenchmen, roused at the noise, snatched their weapons and looked in vain for an enemy. The panic-stricken warriors, reassured at length, waded crestfallen ashore, and the whole ended in a laugh.

At the Chaudière, an abundant contribution of tobacco was collected on a wooden platter, and, after a solemn harangue, was thrown to the guardian Manitou. On the seventeenth of June they approached Montreal, where the assembled traders greeted them with discharges of small arms and canon. Here, among the rest, was Champlain's lieutenant, Du Parc, with his men, who had amused their leisure with hunting, and were revelling in a sylvan abundance, while their baffled chief, with worry of mind, fatigue of body, and a Lenten diet of half-cooked fish, was grievously fallen away in flesh and strength. He kept his word with De Vignan, left the scoundrel unpunished, bade farewell to the Indians, and, promising to rejoin them next year, embarked in one of the trading-ships for France.—(*Pioneers of France in the New World.*)

FRANCIS PARKMAN.

(1) "…. et leur dis, que je les avois jusques à ce jour estimez hommes, et veritables, et que maintenant ils se montroient enfants et mensongers," etc.—*Champlain,* (1632,) l. IV. c. II.

(2) "Alors Tessouat…. luy dit en son langage: Nicholas, est-il vray que tu as dit avoir esté aux Nebecerini? Il fut longtemps sans parler, puis il leur dit en leur langue, qu'il parloit aucunement: Ouy j'y ay esté. Aussitôt ils le regardèrent de travers, et se jetant sur luy, comme s'ils l'eussent voulu manger ou deschirer, firent de grands cris, et Tessouat luy dit: Tu es un asseuré menteur; tu sçais bien que tous les soirs tu couchois à mes costez avec mes enfants, et tous les matins tu t'y levois: si tu as esté vers ces peuples, ç'a esté en dormant," etc.—*Champlain,* (1632,) l. IV. c. II.

(1) The name is used here for distinctness. The locality is indicated by Champlain as *le Saut*, from the Saut St. Louis, immediately above.

SCIENCE.

Leaves from Gosse's Romance of Natural History.

THE RECLUSE.

(Continued.)

The character of this interesting antelope, as well as that of the scenery in which it dwells, are so pleasantly touched in a little poem that I have lately met with, by Miss Crewdson, that I make no apology for quoting it at length:—

THE GEMZÉ FAWN. (2)

In a sunny Alpine valley
'Neath the snowy Wetterhorn,
See a maiden, by a châlet,
Playing with a Gemzé fawn.
How he pricks his ears to hear her,
How his soft eyes flash with pride,
As she tells him he is dearer
Than the whole wide world beside!
Dearer than the lambkins gentle,
Dearer than the frisking kids,
Or the pigeon on the lintel,
Coming—going—as she bids.
Dearer than the first spring lily,
Peeping on the snowy fell;
Dearer than his little Willie
To the heart of William Tell.

(2) In all the German-Swiss cantons, and throughout the Tyrol, the Chamois is called the "Gemzé;" the other name, "Chamois," prevailing only in those cantons in which French is spoken.

By a gushing glacier fountain,
On the giant Wetterhorn,
'Midst the snow-fields of the mountain,
Was the little Gemzé born:
And his mother, though the mildest
And the gentlest of the herd,
Was the fleetest and the wildest,
And as lightsome as a bird.
But the gazer watch'd her gliding
In the silence of the dawn,
Seeking for a place of hiding,
For her little, tender fawn;
So he mark'd her, all unheeding
(Swift and sure the bolt of death);
And he bore her, dead and bleeding,
To his Alpine home beneath.
And the orphan Gemzé follows,
Calling her with plaintive bleat,
O'er the knolls and through the hollows,
Trotting on with trembling feet.

See, the cabin latch is raised
By a small and gentle hand,
And the face that upward gazed
Had a smile serene and bland;
Bertha was the Switzer's daughter,
And herself an orphan child;
But her sorrows all had taught her
To be gentle, kind, and mild.
You might see a tear-drop quivering
In her honest eye of blue,
As she took the stranger, shivering,
To her heart so warm and true.
"*I* will be thy mother, sweetest,"
To the fawn she whisper'd low;
"I will heed thee when thou bleatest,
And will solace all thy woe."
Then the tottering Gemzé, stealing
Towards her, seem'd to understand,
Gazing on her face, and kneeling,
Placed his nose within her hand!

Every day the Switzer maiden
Shared with him her milk and bread;
Every night the fawn is laid on
Moss and ling beside her bed.
Blue as mountain periwinkle
Is the ribbon round his throat,
Where a little bell doth tinkle
With a shrill and silvery note.
When the morning light is flushing
Wetterhorn so cold and pale,
Or when evening shades are hushing
All the voices of the vale,
You might hear the maiden singing
To her happy Gemzé fawn,
While the kids and lambs she's bringing
Up or down the thymy lawn.

Spring is come, and little Bertha,
With her chamois at her side,
Up the mountain wander'd further
Than the narrow pathway guide.
Every step is paved with flowers :—
Here the bright mezereon glows;
Here the tiger-lily towers,
And the mountain cistus blows;
Here the royal eagle rushes
From his eyrie overhead;
There the roaring torrent gushes
Madly o'ver its craggy bed.
Hark!—from whence that distant bleating,
Like a whistle clear and shrill?
Gemzé! ah, thy heart is beating,
With a wild and sudden thrill!
Voices of thy brothers, scouring
Over sparkling fields of ice,
Where the snow-white peaks are towering
O'er the shaggy precipice.

Bertha smiled to see him listening,
(Arching neck, and quivering ear,
Panting chest, and bright eyes glistening,)
To that whistle wild and clear.

Little knew she that it sever'd
All that bound him to the glen,
That her gentle bands are shiver'd,
And the tame one—*wild again!*
To the next wild bleat that soundeth,
Makes he answer strong and shrill;
Wild as wildest, off he boundeth
Fleet as fleetest o'er the hill.
"Gemzé! Gemzé! Kommt, mein lieber!" (1)
Echoes faint, from height to height:
Dry thy tears, sweet Bertha! never
Will he glance again in sight.
But, when paling stars are twinkling
In the twilight of the morn,
Thou may'st hear his bell a-tinkling
'Midst the snows of Wetterhorn.
And the kindness thou bestowest
On the helpless, thou shalt prove,
Somehow, when thou little knowest,
In a blessing from above!

An interesting scene of recluse life is exhibited by many a little pool in tropical America, such as I have seen in Jamaica, and such as I have seen, too, in the parts of the northern continent bordering on the tropics. You penetrate the sombre woods perhaps for miles, and suddenly, in the midst of the most perfect quietude, you see a great light, and open upon an area occupied by a green level, which, from indications here and there, you perceive to be water, covered with a coat of vegetation. The lofty trees rise up in closely-serried ranks all around, from the very margin, and their long branches, as if rejoicing in the unwonted room and light, stretch out over the water, and dip their twigs into it. The long, pendent strings of parasites hang down, and lightly touch the surface, whipping the floating duck-weed aside when a storm agitates the great trees. From time to time, one and another have been prostrated before the tempest, and, falling into the pond, project their half-decayed trunks in great snags from the sluggish surface, or form piers, which stretch away from the banks into the midst of the lake, and precarious bridges across different portions.

If we make our way by the starlight of the early morning to such a forest-pond as this, arriving silenty and cautiously at its margin, before the light of the advancing dawn has yet struggled into the little inclosure, and take our station behind the shelter of a leafy bush, we shall discern that the spot is instinct with life. A loud clanging cry is uttered, like the note of a child's trumpet, which is immediately taken up in response from the opposite side of the pool. Then a whirring of wings, and much splashing of water. More of the loud clangours, and more splashing; and now the increasing light enables us to discern a dozen or a score of tiny black objects sitting on the surface, or hurrying to and fro. They look like the tiniest of ducks, but are jet black; some are sitting on the points of the projecting snags: and, by their erect attitude, we readily recognise that they are grebes.

Now it is light enough to see clearly, and the suspicious birds do not yet seem to be aware of our presence. Yonder, on the branch of a half-submerged tree, is a great dark mass, and a little bird sitting in it; it must surely be her nest. We must examine it.

Yet, stay! What is that serpent-like object that so quietly sits on yonder overhanging bough? Is it indeed a black snake reposing, with elevated neck, upon the horizontal limb? It moves! It is a bird! The lithe and slender neck is thrown round, and we see the head and beak of a bird, which begins to preen and arrange the plumage of a black body, which is squatted close to the bough. Mark that sudden start! The neck is elevated to the utmost; the head is raised in an attitude of attention; and the bird remains in the most absolute stillness. It was that leaf that we rustled, in the nervousness of our desire to see him more distinctly; he heard it, and is on the watch. Lo, he is gone! he dropped, like a stone, perpendicularly into the pool below; and yet not like a stone, for he made no splash, and we are amazed that so large a body could be immersed from so great a distance, and yet produce scarcely a perceptible disturbance of the surface.

The little grebes, too, have taken the warning; they are gone, all but the faithful mother on the nest. She yet lingers; but we show ourselves, and advance; and now she jumps into the green water, and disappears; and all is as still and sombre as if we were gazing on a grave.

In our sequestered rural districts we have a little animal not uncommon, almost the tiniest of all quadrupeds, the water-shrew, whose graceful form and pleasing habits are very seldom seen, because of its cautious timidity. With great care it may, however, be occasion-

(1) Come, my darling!

ally detected in its gambols, and, with due precaution, watched. The following charming picture of the little creature at freedom, all unconscious of observation, has been drawn by Mr. Dovaston:—"On a delicious evening, far in April 1825, a little before sunset, strolling in my orchard, beside a pool, and looking into the clear water for insects I expected about that time to come out, I was surprised by seeing what I momentarily imagined to be some very large beetle, dart with rapid motion, and suddenly disappear. Laying myself down, cautiously and motionless, on the grass, I soon, to my delight and wonder, observed it was a mouse. I repeatedly marked it glide from the bank under water, and bury itself in the mass of leaves at the bottom; I mean the leaves that had fallen off the trees in autumn, and which lay very thick over the mud. It very shortly returned, and entered the bank, occasionally putting its long, sharp nose out of the water, and paddling close to the edge. This it repeated at very frequent intervals, from place to place, seldom going more than two yards from the side, and always returning in about half a minute. I presume it sought and obtained some insect or food among the rubbish and leaves, and retired to consume it. Sometimes, it would run a little on the surface, and sometimes, timidly and hastily, come ashore, but with the greatest caution, and instantly plunge in again.

"During the whole sweet spring of that fine year I constantly visited my new acquaintance. When under water he looks gray, on account of the pearly cluster of minute air-bubbles that adhere to his fur, and bespangle him all over. His colour, however, is very dark brown."....

After entering into some descriptive details of the specimen, Mr. Dovaston proceeds:—"This minute description I am enabled to give, having caught it in an angler's landing-net, and carefully inspected it in a white basin of water. The poor creature was extremely uneasy under inspection, and we soon, with great pleasure, restored it to liberty and love, for he had a companion, which, from her paler colour and more slender form, we doubted not was his mate, and we were fearful, by our intrusion, of giving offence to either.

"He swims very rapidly; and though he appears to dart, his very nimble wriggle is clearly discernible. He is never seen till sunset; but I saw him every evening I watched, with the most perfect facility. They are easily discovered about the going down of the sun, on still evenings, by the undulating semicircles quickly receding from the bank of the pool, when they are dabbling at the side. I believe this to be the animal said to be so long lost in England, the water-shrew (*Sorex fodiens* of Pennant)....

"I have said he only appears at evening, and such are his habits. Once, at broad and bright noon, while leaning on a tree, gazing on the sun-sparkles passing (like fairy lights) in numberless and continual succession under the gentlest breath of air, I was aware of my little friend running nimbly on the surface among them. My rapture caused me to start with delight, on which he vanished to security, within his rush-fringed bank.... I should have mentioned that, on very still evenings, when my ear was close to the ground, I fancied I heard him utter a very short, shrill, feeble sibilation, not unlike that of the grasshopper-lark, in mild, light summer nights, but nothing near so loud, or long continued. Though I have watched for him warily in that and other places, after having, to the end of May, contributed to the myriads of my amusements, I never saw him more."

THE UNKNOWN.

Letouillant tells us, in his "Travels in the East," that whenever he arrived at an eminence, whence he could behold a distant mountain range, he felt an irrepressible desire to reach it; an unreasoning persuasion that it would afford something more interesting, more delightful, than anything which he had yet attained. The charm lay here, that it was *unknown*: the imagination can people the unexplored with whatever forms of beauty or interest it pleases; and it does delight to throw a halo round it, the halo of hope.

"'Tis distance lends enchantment to the view,
And clothes the mountain in its azure hue."

One of the greatest pleasures of the out-of-door naturalist depends upon this principle. There is so great variety in the objects which he pursues, and so much uncertainty in their presence at any given time and place, that hope is ever on the stretch. He makes his excursions not knowing what he may meet with; and, if disappointed of what he had pictured to himself, he is pretty sure to be surprised with something or other of interest that he had not anticipated. And much more does the romance of the unknown prevail to the natural history collector in a new and unexplored country. It has been my lot to pursue various branches of zoology, in regions where the productions were to science largely, to myself wholly, unknown. In a rich tropical island, such as Jamaica, where nature is prodigal in variety and beauty, and where, throughout the year, though there is change, there is no cessation of animal or vegetable activity, there was novelty enough in every day's *opima spolia* to whet the expectation of to-morrow. Each morning's preparation was made with the keenest relish, because there was the undefined hope of good things, but I knew not what; and the experience of each day, as the treasures were gloated over in the evening, was so different in detail from that of the preceding, that the sense of novelty never palled. If the walk was by the shore, the state of the tide, the ever varying wave-washings, the diverse rocks with their numerous pools and crannies and recesses, the cliffs and caves, the fishes in the shallows, the nimble and alert crustacea on the mud, the shelled mollusca on the weedbeds, the echinoderms on the sand, the zoophytes on the corals, continually presented objects of novelty. If I rode with vasculum and insect-net and fowling-piece into the mountain-woods, there was still the like pleasing uncertainty of what might occur, with the certainty of abundance. A fine epiphyte orchid scents the air with fragrance, and it is discovered far up in the fork of some vast tree; then there is the palpitation of hope and fear as we discuss the possibility of getting it down; then come contrivances and efforts,—pole after pole is cut and tied together with the cords which the forest-climbers afford. At length the plant is reached, and pushed off, and triumphantly bagged; but lo! while examining it, some elegant twisted shell is discovered, with its tenant snail, crawling on the leaves. Scarcely is this boxed, when a gorgeous butterfly rushes out of the gloom into the sunny glade, and is in a moment seen to be a novelty; then comes the excitement of pursuit; the disappointment of seeing it dance over a thicket out of sight; the joy of finding it reappear; the tantalising trial of watching the lovely wings flapping just out of reach; the patient waiting for it to descend; the tiptoe approach as we see it settle on a flower; the breathless eagerness with which the net is poised; and the triumphant flush with which we contemplate the painted wings within the gauze; and the admiration with which we gaze on its loveliness when held in the trembling fingers. Another step or two, and a gay-plumaged bird rises from the bush, and falls to the gun; we run to the spot and search for the game among the shrubs and moss; at last it is found, admired, and committed to a little protective cone of paper. Now a fern of peculiar delicacy appears; then a charming flower, of which we search for ripe seed: a glittering beetle is detected crawling on the gray bark of a lichened tree; here is a fine caterpillar feeding; yonder a humming-bird hovering over a brilliant blossom; and here a female of the same spangled bird sitting in her tiny nest. By and by we emerge into a spot where, for some cause or other, insects seem to have specially congregated; a dozen different kinds of butterflies are flitting to and fro in bewildering profusion of beauty, and our collecting-box is half filled in the course of an hour. Meanwhile we have shot two or three more birds; caught a pretty lizard; seen a painted tree-frog, which escaped to be captured another day; obtained some strange nondescript creatures under stones; picked a beautiful spider from a web; taken a host of banded shells;—and so the day wears on. And then in the evening what a feasting of the eager eyes as they gloat over the novelties, assigning each to its place, preparing such as need preparation, and recording the facts and habits that help to make up the as yet unwritten history of all.

I turn from my own experience to that of those who have, with similar tastes and similar pursuits, rifled still more prolific regions. Let us hear Mr. Bates, who for the last eleven years has been exploring the very heart of South America in the service of natural history, chiefly devoting himself to the gorgeous entomology of the great Valley of the Amazon. He has drawn a picture of an average day's proceedings, such as makes a brother naturalist's mouth water, and almost induces him to pack up his traps, and look out in *The Times*' shipping column for the next ship sailing for Pará:—

"The charm and glory of the country are its animal and vegetable productions. How inexhaustible is their study! Remember that, as to botany, in the forest scarcely two trees of the same species are seen growing together. It is not as in temperate countries (Europe), a forest of oak, or birch, or pine—it is one dense jungle; the lofty forest trees, of vast variety of species, all lashed and connected by climbers, their trunk covered with a museum of ferns, tillandsias arums, orchids, &c. The underwood consists of younger trees—great variety of small palms, mimosas, tree-ferns, &c; and the ground is laden with fallen branches—vast trunks covered with parasites, &c. The animal denizens are in the same way of infinite variety; not numerous, as to give the appearance at once of tumultuous life, being too much scattered for that; it is in course of time only that one forms an idea of their numbers. Four or five species of monkey are constantly seen. The birds are in such variety that it is not easy to get two or three of the same species. You see a trogon one day; the

next day and the day after, another each day; and all will be different species. Quadrupeds or snakes are seldom seen, but lizards are everywhere met with: and sometimes you get tortoises, tree-frogs, &c. Insects, like birds, do not turn up in swarms of one species; for instance, you take a dozen longicorns one day, and they are sure to be of eight or ten distinct species. One year of daily work is scarcely sufficient to get the majority of species in a district of two miles' circuit.

"Such is the scene of my present labours; and all the rest of the Amazon is similar, though less rich; the river Tapajos alone differing, being a mountainous country. Having thus my work at hand, I will tell you how I proceed. My house is in the centre of the town, but even thus only a few minutes' walk from the edge of the forest. I keep an old and a young servant, on whom I rely for getting eatables and preparing my meals, so as to leave me unembarrassed to devote all my thoughts to my work. Between nine and ten a. m. I prepare for the woods; a coloured shirt, pair of trousers, pair of common boots, and an old felt hat, are all my clothing; over my left shoulder slings my double-barrelled gun, loaded, one with No. 10, one with No. 4 shot. In my right hand I take my net, on my left side is suspended a leathern bag with two pockets, one for my insect-box, the other for powder and two sorts of shot; on my right side hangs my "game-bag," an ornamental affair, with red leather trappings and thongs to hang lizards, snakes, frogs, or large birds. One small pocket in this bag contains my caps; another, papers for wrapping up the delicate birds; others for wads, cotton, box of powdered plaster; and a box with damped cork for the Micro-Lepidoptera; to my shirt is pinned my pin-cushion, with six sizes of pins. A few minutes after entering the edge of the forest, I arrive in the heart of the wilderness; before me nothing but forest for hundreds of miles. Many butterflies are found on the skirts of the forest; in the midst of numbers flitting about, I soon distinguish the one I want—often a new one—*Erycinidæ*, *Hesperia*, *Thecla*, or what not. *Coleoptera* you see nothing fine of at first; a few minute *Halticæ* on the leaves, or small *Curculios*, or *Eumolpi*. When you come to the neighborhood of a newly-fallen tree, is soon enough to hunt closely for them; not only wood-eating species, but all kinds seem to congregate there; *Agras* and *Lebias* in the folded leaves, grand *Cassidæ*, and *Erotyli*, *Rutelæ*, or *Melolonthids*, *Gymnetis*, &c.; often a *Ctenostoma* running along some slender twig. It requires a certain kind of weather for *Coleoptera*, and some days all seem to be absent at once.

"Whilst I am about these things, I often hear the noise of birds above—pretty tanagers, or what not. You cannot see the colours of red, cobalt-blue, or beryl-green, when they are up in the trees; and it takes months of experience to know your bird. I have sometimes shot at small, obscure-looking birds up the trees, and when they have fallen, have been dazzled by their exquisite beauty.

"I walk about a mile straight ahead, lingering in rich spots, and diverging often. It is generally near two p. m. when I reach home, thoroughly tired. I get dinner, lie in hammock a while reading, then commence preparing my captives, &c.: this generally takes me till five p. m. In the evening I take tea, write and read, but generally in bed by nine."

Africa is the land of wild beasts. The grandest forms of the terrestrial creation have their habitation in that continent. The elephant, the hippopotamus; several different sorts of rhinoceros, the zebra, the quagga, the giraffe; multitudes of antelopes, some of them of colossal dimensions; the buffalo; the gorilla, the chimpanzee, the mandril, and other baboons and monkeys; the lion, the panther, the leopard;—these are only the more prominent of the quadrupeds which roam the plains and woods of Africa.

It is highly probable that an animal of ancient renown, and one in which England has (or ought to have) a peculiar interest, resides in the region just indicated. I refer to one of the supporters of Britain's shield, the famed Unicorn. We may not, to be sure, find him exactly what the heraldic artists delight to represent him—a sort of mongrel between a deer and a horse, with cloven hoofs, a tuft-tipped tail, and a horn spirally twisted to a point; but there may be the original of the traditionary portrait of which this is the gradually corrupted copy.

Dr. Andrew Smith, an able and sober zoologist, who has investigated with much enterprise and success the zoology of South Africa, has collected a good deal of information about a one-horned animal which is yet unknown to Europeans, and which appears to occupy an intermediate rank between the massive rhinoceros and the lighter form of the horse. Cavassi, cited by Labat, heard of such a beast in Congo under the name of *Abada;* and Ruppel mentions it as commonly spoken of in Kordofan, where it is called *Nillekma*, and sometimes *Arase*—that is *unicorn*. Mr. Freeman, the excellent missionary whose name is so intimately connected with Madagascar, received the most particular accounts of the creature from an intelligent native of a region lying northward from Mozambique. According to this witness, an animal called the Ndzoodzoo is by no means rare in Makooa. It is about the size of a horse, extremely fleet and strong. A single horn projects from its forehead from two feet to two and a-half feet in length. This is said to be flexible when the animal is asleep, and can be curled up at pleasure, like an elephant's proboscis; but it becomes stiff and hard under the excitement of rage. It is extremely fierce, invariably attacking a man whenever it discerns him. The device adopted by the natives to escape from its fury, is to climb a thick and tall tree out of sight. If the enraged animal ceases to see his enemy, he presently gallops away; but, if he catches sight of the fugitive in a tree, he instantly commences an attack on the tree with his frontal horn, boring and ripping it till he brings it down, when the wretched man is presently gored to death. If the tree is not very bulky, the perseverance of the creature usually succeeds in overturning it. His fury spends itself in goring and mangling the carcase, as he never attempts to devour it. The female is altogether without a horn.

Almost as little known as the heart of Africa are the depths of ocean. The eye penetrates in the clear crystalline sea a few fathoms down, and beholds mailed and glittering forms flitting by; the dredge gathers its scrapings; divers plunge out of sight, and bring up pearls; and the sounding-lead goes down, down, down, hundreds of fathoms, and when it comes up, we gaze with eager eyes to see what adheres to the tallow "arming;" the tiny shells, the frustules of diatoms, even the atoms of coral sand,—curious to learn what is at the bottom of the deep. But, after all, it is much like the brick which the Greek fool carried about as a sample of the house he had to let.

Who can penetrate into the depths of the ocean to trace the arrowy course of the mailed and glittering beings that shoot along like animated beams of light? Who can follow them to their rocky beds and coral caverns? The wandering mariner sees with interested curiosity the flying-fishes leaping in flocks from the water, and the eager bonito rushing after them in swift pursuit; but who can tell what the flying-fish is doing when not pursued, or how the bonito is engaged when the prey is not before him? How many pleasing traits of conjugal or parental attachment the waves of the fathomless sea may conceal, we know not: what ingenious devices for self-protection; what structures for the concealment of eggs or offspring; what arts of attack and defence; what manœuvrings and stratagems; what varied exhibitions of sagacity, forethought, and care; what singular developments of instinct;—who shall tell?

The aquarium has, indeed, already enlarged our acquaintance with the curious creatures that inhabit the waters; and not a few examples of those habits and instincts that constitute animal *biography*, have by this means been brought to light. Much more will doubtless be learned by the same instrumentality; but there will still remain secrets which the aquarium will be powerless to resolve. From its very nature it can deal only with the small, and those which are content with little liberty; for the multitude of large, unwieldy, swift-finned races, which shoot athwart the deep, and for the countless hosts of tiny things, to whose organisation even the confinement of a vessel is speedy death, we must find some other device before we can cultivate acquaintance with them.

It is true, we can put together a goodly number of individual objects, which various accidents have from time to time revealed to us from the depths, and form them into an imaginary picture. Schleiden has done this, and a lovely delineation he has made. You have only to gaze on it to admire it: I would not abate your admiration; I admire it too:—but remember, after all, it is but a fancy sketch of the unknown; it is only "founded on fact."

"We dive," he observes, "into the liquid crystal of the Indian Ocean, and it opens to us the most wondrous enchantments of the fairy tales of our childhood's dreams. The strangely branching thickets bear living flowers. Dense masses of Meandrinas and Astræs contrast with the leafy, cup-shaped expansions of the Explanarias, the variously-ramified Madrepores, which are now spread out like fingers, now rise in trunk-like branches, and now display the most elegant array of interlacing branches. The colouring surpasses everything: vivid green alternates with brown or yellow; rich tints of purple, from pale red-brown to the deepest blue. Brilliant rosy, yellow, or peach-coloured Nullipores overgrow the decaying masses, and are themselves interwoven with the pearl-coloured plates of the Retipores, resembling the most delicate ivory carvings. Close by, wave the yellow and lilac fans, perforated like trellis-work, of the Gorgonias. The clear sand of the bottom is covered with the thousand strange forms and tints of the sea-urchins, and star-fishes. The leaf-like Flustras and Escharas adhere like mosses and lichens to the branches of the corals; the yellow, green, and purple-striped Limpets cling like monstrous cochineal insects upon their trunks. Like gigantic cactus-blossoms, sparkling in the most ardent colours, the Sea-anemones expand their crowns of tentacles upon the broken rocks, or more modestly embellish the bottom, looking like beds of variegated ranunculuses. Around

the blossoms of the coral shrubs play the humming-birds of the ocean,—little fish sparkling with red or blue metallic glitter, or gleaming in golden green, or in the brightest silvery lustre.

"Softly, like spirits of the deep, the delicate milk-white or bluish bells of the jelly fishes float through this charmed world. Here the gleaming violet and gold-green Isabelle, and the flaming yellow, black, and vermilion-striped Coquette, chase their prey; there the band-fish shoots, snake-like, through the thicket, like a long silver ribbon, glittering with rosy and azure hues. Then come the fabulous cuttle-fish, decked in all colours of the rainbow, but marked by no definite outline, appearing and disappearing, intercrossing, joining company and parting again, in most fantastic ways; and all this in the most rapid change, and amid the most wonderful play of light and shade, altered by every breath of wind, and every slight curling of the surface of the ocean. When day declines, and the shades of night lay hold upon the deep, this fantastic garden is lighted up in new splendour. Millions of glowing sparks, little microscopic Medusas and Crustaceans, dance like glow-worms through the gloom. The Sea-feather, which by daylight is vermilion-coloured, waves in a greenish phosphorescent light. Every corner of it is lustrous. Parts which by day were dull and brown, and retreated from the sight amid the universal brilliancy of colour, are now radiant in the most wonderful play of green, yellow, and red light; and to complete the wonders of the enchanted night, the silver disc, six feet across, of the moon-fish, moves, slightly luminous, among the crowd of little sparkling stars.

"The most luxuriant vegetation of a tropical landscape cannot unfold as great wealth of form, while in the variety and splendour of colour it would stand far behind this garden landscape, which is strangely composed exclusively of animals, and not of plants; for, characteristic as the luxuriant development of vegetation of the temperate zones is of the sea-bottom, the fulness and multiplicity of the marine Fauna is just as prominent in the regions of the tropics. Whatever is beautiful, wondrous, or uncommon in the great classes of fish and echinoderms, jelly-fishes and polypes, and the molluscs of all kinds, is crowded into the warm and crystal waters of the tropical ocean,—rests in the white sands, clothes the rough cliffs, clings where the room is already occupied, like a parasite, upon the first comers, or swims through the shallows and depths of the element—while the mass of the vegetation is of a far inferior magnitude. It is peculiar in relation to this, that the law valid on land, according to which the animal kingdom, being better adapted to accommodate itself to outward circumstances, has a greater diffusion than the vegetable kingdom;—for the Polar Seas swarm with whales, seals, sea-birds, fishes, and countless numbers of the lower animals, even where every trace of vegetation has long vanished in the eternally frozen ice, and the cool sea fosters no sea-weed;—that this law, I say, holds good also for the sea, in the direction of its depth; for when we descend, vegetable life vanishes much sooner than the animal, and, even from the depths to which no ray of light is capable of penetrating, the sounding-lead brings up news at least of living infusoria."

Who has not felt, when looking over a boat's side into the clear crystal depth, a desire to go and explore? Even on our own coasts, to see the rich luxuriant forests of *Laminaria* or *Alaria*, waving their great brown fronds to and fro, over which the shell-fishes crawl, and on which the green and rosy-fingered Anemones expand like flowers, while the pipe-fishes twine about, and the brilliant wrasses dart out and, decked in scarlet and green,—is a tempting sight, and one which I have often gazed on with admiration.

"Nothing can be more surprising and beautiful," says Sir A. de Capell Brooke, "than the singular clearness of the water of the Northern Seas. As we passed slowly over the surface, the bottom, which here was in general a white sand, was clearly visible, with its minutest objects, where the depth was from twenty to twenty-five fathoms. During the whole course of the tour I made, nothing appeared to me so extraordinary as the inmost recesses of the deep unveiled to the eye. The surface of the ocean was unruffled by the slightest breeze, and the gentle splashing of the oars scarcely disturbed it. Hanging over on the gunwale of the boat, with wonder and delight I gazed on the slowly moving scene below. Where the bottom was sandy, the different kinds of *Asterias*, *Echinus*, and even the smallest shells, appeared at that great depth conspicuous to the eye; and the water seemed, in some measure, to have the effect of a magnifier, by enlarging the objects like a telescope, and bringing them seemingly nearer. Now, creeping along, we saw, far beneath, the rugged sides of a mountain rising towards our boat, the base of which, perhaps, was hidden some miles in the great deep below. Though moving on a level surface, it seemed almost as if we were ascending the height under us; and when we passed over its summit, which rose in appearance to within a few feet of our boat, and came again to the descent, which on this side was suddenly perpendicular, and overlooking a watery gulf, as we pushed gently over the last point of it, it seemed as if we had thrown ourselves down this precipice; the illusion, from the crystal clearness of the deep, actually producing a start. Now we came again to a plain, and passed slowly over the submarine forests and meadows, which appeared in the expanse below; inhabited, doubtless, by thousands of animals, to which they afford both food and shelter—animals unknown to man; and I could sometimes observe large fishes of singular shape gliding softly through the watery thickets, unconscious of what was moving above them. As we proceeded, the bottom became no longer visible; its fairy scenes gradually faded to the view, and were lost in the dark green depths of the ocean."

(To be continued.)

EDUCATION.

The Hearty Worker.

A sound mind in a sound body, a sound mind soundly worked, are precious gifts.

But these suppose, and, alas, have opposites,— bodies diseased, and minds diseased—minds working, but unsoundly working. To secure physical soundness, the efforts and the skill put forth, and the labour gone through, and the means spent, exceed counting—lie not within the reach of knowledge. To give soundness to the mental man, and make his working sound, needs as much skill, and doing and means, and experimenting, as the other; nay more; but with each and every success—with heaven's blessing – there attend higher, nobler and more lasting results.

The machinery of the body is marvellous; but it will perish; that of the living man will never. Health to the first is momentary; soundness to the second is an aye, aye,—sempiternity. The enjoyment which the first gives is just like itself—a moment may measure it; the second has a fruition *which time cannot kill*. And however much the latter depends on the former for energy and life's relish, there lies within itself an undying power, and a life fountain, whose rill, duration cannot dry. If, then, so much is done to preserve, and restore when impaired, bodily soundness, think you that at least as much should be done to give mental saneness? To work out in the mind, by sound working, a soundness that will leaven the whole man, and chase infirmity from his being; to make hale what was diseased; strong what was feeble; to cure what a thousand ills had crippled and battered; work a living energy out of what was morbid and vitiated, a healthy *vis viva* out of an active virus, is surely a work which in value cannot be computed. And applies not all this to man on the stage of time? At one time he is found all health and life; at another, the prey of ills without number,— his mind, the greater sufferer—a suffering not so readily felt, not so easily traced, not always so perceived as to be acknowledged. How many unsound states of mind are there which none of us guess at,—concealed beneath apparent mental health, beneath a brilliant exterior, even under an acknowledged healthy state?— Some part lies prostrate and withering, and no one knows it; a measure of activity is manifest while the withering part lies under insidious concealment, and the blighting power is doing his work, till, unless checked and subdued by an opposing power, the mind's noble powers become a wreck,—an irrecoverable ruin.

In our endeavours to draw attention to mental culture, we confine not our address to men of exuberant gifts, distinguished scholars, whose gifts and trained skill, and first-rate success have given them marked distinction and rank in training their own and other minds—*to help on our work*. We address every one, whether in school or out of school, who tries to teach youth.— To be a hearty worker in this great work is our EARNEST.

The hearty worker is he whom we want, and must, if possible, have, be he the instructor of the mere elements of words, or of subjects which require the most shining powers and intellects of highest train. And such, whatever his standing may be, or his developed state of mind, or his fund of general knowledge, we recognize as the true man of his place.

There he may show, in what he does, and in what he effects, the power of the giant, the intellect of a Bacon, or the working skill of a Watt.—But we denounce as unworthy of his vocation, name and place, the lukewarm, the at-it-and-from-it man, the dry lifeless routiner—who works because he cannot help it, whose teaching eye is more and more frequently on the pay than on the work, on the expiry of his working hours, or on the termination of his term, than on his work, how he may do justice to his pupil, develop, train, enrich with knowledge his immortal part.

It would be good for the country, good for our youth, good for the prosperity of our schools, were our school-doors shut against such. But they have got in, and they cannot easily be got out. And I think the best and most prudent thing we can do is, now that they are in, to remind them of their duty,—their responsibility and accountability,—the importance of their work,—the loss to youth of their inefficient teaching,—the evils they inflict on society,—and the disserviceable effects of their examples.

We hope they are within the reach of reformation; that they are not deaf to earnest remonstrance; that yet a spark of zeal, which admits of kindling, lies within; that that self-respect, to be worthy of their profession, still glimmers in their bosom. We certainly have a claim on them as within the sphere of the intelligent and active—men of high effort and true progress. We, therefore, stop not out of our province to address them. And in doing so, let us not disguise the truth, that many, not a few of our teachers need a little of the life of a resurrection. Indeed, we ALL need a little of a resurrection life. We have yet too much teaching and too much inspection without sufficient life. We need more of the *vivida vis animi*—more of spring life power, before our educational institutions give evidence of sound thorough teaching.—In stirring up one another to hearty efforts, let us consider the high position which our vocations give us. Whatever our place in the teaching field may be, clustered around the schoolroom, however humble, gives us an exalted position.—The celebrated Dr. Chalmers said "that one of the sublimest sights on earth is seeing a child learning the letters of his mother tongue." And so it is. For here is his grand starting point; the first step on the path which time's close cannot shut; the first uplifting of a developing intellect, which may one day find it standing by the archangel. Taking this high and heavenward view of our subject, who would wish to see an unworthy hand put to the work of training this the richest gift of the Creator,—the breathing of the Infinite, in its first virgin efforts, - where the gentlest handling the most skilful treatment, and the most patient persevering efforts, with a knowledge of its unfolding powers and peculiarity of mould, IS DEMANDED? Every inch of its training course is too consecrated, too noble to be trodden by the slack, and the inefficient and soulless would-be teacher.

Fellow labourers, co-workers in the same field, let us be serious in this matter. We have taken up our position as educators of youth,—the promoters of a cause which is second to none. On its success the civilization of the human race depends,—the recovery of the human race from barbarism depends,—the improvement of every art and every science depends,—the safety of life and property depends.—To make house and home places of comfort and safety, of intelligence and sobriety—bringing all within that bond of intelligence, moral and God-fearing love, which is the very cordial of life,—the lenitive of our sorrows,—the multiplier of our joys,—the grand source of our animation and repose, DEPENDS ON EDUCATION,—*viewing it in its broad legitimate sense.*

To every teacher—every educator, I would say, if you desire to be of value in your sphere of life,—a credit to your profession,—and respect your own character as an educator, suffer not yourself to come near, much less to enter the waste of the unworthy mind culturist; and IF there, escape, if you wish to be at all of any use in your position, or cease to be an encumberer on the hallowed ground of education. Who would not wish those to whom the rising life of the world is entrusted, to be the fittest men and the fittest women for the work; to be hearty workers in that field from which are daily springing up the countless men and the countless women to whom is committed, by a higher than man, the working out of the destinies of society—of the world?—Tell me the class of men which comes in before them, which precedes them in worth, from which society derives more benefit, civilization more life and growth, and religion more help?—It matters not where the teacher ranks in this sphere; whether he is dealing with, directing and encouraging, the virginal efforts of the child, or giving cast and mould to the student, a finishing touch to his equipment for the battles of life; in position and worth, the true teacher stands high.—The grandeur and beauty and value of his work give him this position.

Whatever light we consider the subject upon which we have touched, and only touched, it is a subject which deeply concerns us; a subject which can never be too much pressed upon our consideration, as educators.

In our teaching we must distinguish which is sun and which is shade; which gives light and soundness, and which only a false glimmer; which gives health and vigour, and which only their semblance.—We object to that kind of teaching which works only in shade; we object to that education whose every part bears the stamp of unsoundness; we object to that training which reaches not to the intellect's core, and with a power which pervades the whole man; we seriously object to that abnormal way of teaching which is without judgment and trained skill.—There may not be the absence of the *volo*, yet an infirmity of purpose,—a paralysis of the will, leading to weak, ineffective efforts.—What we want is that instruction, that mind training which throws across the student's course of training rays of light fresh and healing; that mind training which makes the man—an active unite in society—well equipped for the battles of life.

Would lazy loungers ever advance society to its present state? Would the influence of our stand-still men ever energize men's spirits to manly efforts—hearty working?—Never would man's intellectual, moral and physical nature have reached its present state of advance without the million efforts of active, earnest men. Where do we look for our bravest, noblest and purest characters? Is it not among our men of work, physical and mental? Who constitute the drags to the advancement of our race? those whose motive to work is necessity—the impending fear of starving: Not surely our hearty working classes; not our earnest effort men, whose capital is time, turning its moments to account. These are our life-men—who adorn humanity, on whom hang the progress of society. See what such men have done to enlighten our race, to dispel those dark clouds of ignorance and superstition which hang over our world, and to give health and vigour to the very frame of society. Let us follow up these ideas a little.—I pronounce him the hearty worker who worketh with skill, energy and talent—ever under train. It is by hearty efforts steadily continued that man raises himself in knowledge. It is by a mind attuned to healthy action that the man of science and of art educates himself to higher and more successful efforts. It is when the mind is nourished and fed by wholesome aliment that it acquires that masculine character by which it is able to act and carry out the results of its own ponderings and head-work masculinely, in applicative results. Take Newton and Watt as examples of unyielding, and ultimate successful efforts. Consider Newton scanning the cycles of the heavens and eliciting from the scroll of enigmatical characters, which himself had framed, the secrets of a sublime astronomy, that high field so replete with wonders, yet surpassed by this greater wonder,—*the intellectual mastery which man has over it.* Just think and wonder how a creature so feeble could have made such a conquest,—that a light struck out within the little earth cell,—the work-shop of the human intellect, should have led to a disclosure so magnificent, that by a calculus of his own formation, the heavens, with their stupendous masses, and inconceivable distances, never trodden by mortals, should have thus been opened to his gaze! Can this be explained any way but by the intervention of Him who sitteth above the heavens and leadeth the cogitations of man

to discoveries otherwise beyond his reach? So would I understand how man, by the working of his spirit, should have been able to penetrate so far and so correctly into the workmanship of Him, whose presence encompasseth the universe, and is enthroned above creation, permitting man, just as He wills, to penetrate the arcana of creation,—enabling him to tell of the suns and the systems which are afar, and of the power which binds them all together in harmonious working,—"as if he had travelled with the line and plummit in his hand to the outskirts of creation, or had carried the torch of discovery round the universe."—Mark, likewise, the successful results of untiring efforts, and perseverance in working, in the late Mr. Watt, in perfecting the steam engine, and rendering it applicable to every purpose of art. For 36 years did Mr. Watt distinguish himself for his highly inventive talents and never tiring experimenting, and at last with crowning results; and till the expiry of time will such men as Newton and Watt cease to be held up as extraordinary instances of untiring efforts, and of what the human intellect can effectuate, when its powers are brought under high and skilful training.

But we need not travel far for high and inviting and encouraging examples to hearty working. They surround us. The very state and advancing stage of literature and erudition—of arts and sciences, the progress and state of society, the comforts of our homes, the freedom of the tongue, the pen and the press, securely guaranteed, all tell us of thousands, hearty working men and women, who have successfully battled oppositions,—countless foes—beaten to pieces their strongest phalanxes; and we see and enjoy and reap the rich fruit of their toiling efforts, improved and extended skill, persistent determination, never yielding to adversaries, nor succumbing to difficulties—even at the expense of health and life.—It is the glory of our profession as educators of youth to have it carried on by intelligent men and women; to have the different subjects of education taught, sent home to the head and hearts of youth, intelligently, with light and life. It is the glory of teaching to be bringing successively on the field of time, to fight life's battles, generations of men and women well equipped to press on and increase the ennobling current of civilization—improving the heads and hearts of men, promoting the growth and health of society, and thus to be multiplying means and multiplying skill, to raise our race, in character and intelligence, in wisdom and sound knowledge, and in energy and moral excellence.—And this is not to be done—it cannot be done, without hearty workers—educators of skill and intelligence, as distinguished for untiring efforts as for erudition and professional ability.

Now with these few statements before us, the results of the working of genius, of intellectual force and training skill, of educated perseverance, and intelligent working, what voice have they to us? What lesson do they teach us? Tell they of no duties inseparable from our position? or tell they of no preparatory requirements for the work, and the ever growing skill and intelligence which should ever accompany our doings?—The voice they send us, the lessons they teach us, and the duties and trainings they suppose, court attention.—In a few plain words let us a little further talk the matter.

To teach others well, supposes that we train ourselves well. The true self-cultivator is, generally, the true pupil cultivator. The teacher who labours most in improving his own mind is the best prepared, and is, generally, the most successful in improving the minds of others. He who has encountered and vanquished difficulties in educating himself, is likely the most successful, successfully to carry his scholars through theirs. He, who in his own experience knows best the gradual unfolding and the developing progress of his own faculties, is surely the best qualified to deal with the minds of his pupils in their perplexities and difficulties, and to lead them on through the progressive stages of their education, by a system more in harmony with mental development, than the teacher who never made this a subject of earnest study. He who has well methodized his own ways of study, so as suitably to answer the peculiarities of his mind, ought to be the best qualified to give suitable character to his methods of teaching others, with respect to their temperaments and dispositions.

The healthier and sounder, and more extended our own culture becomes, the more solid and expansive will the education of our youth become; and, surely, the more sound-headed and sound-hearted and skilful our educators are, the greater the chance is that those whom they instruct will be so too. If, then, we are in earnest in the matter of education,—doing our best to give it a higher tone, and a character ever on the ascendant, the more should our efforts be, to become, each, the hearty worker in the cultivation of self, and in the discharge of duty.—We are backed by pen and type, the poet's harp, and thousands of living voices.

Men of thought! be up and stirring
Night and day:
Sow the seed—withdraw the curtain—
Clear the way!
Men of action, aid and cheer us,
As ye may!
There's a fount about to stream,
There's a light about to beam,
There's a warmth about to glow,
There's a flower about to blow.
There's a midnight blackness changing
Into grey:
Till education rule the day.
CLEAR THE WAY!
Once the welcome light has broken,
Who shall say
What may be the lustrous glories
Of the day?
What the evil that shall perish
In its ray?
Aid the dawning, tongue and pen;
Aid it hopes of honest men,
Aid it paper—aid it, type—
Aid it, for the hour is ripe,
And our effort must not slacken
Into play.
Men of thought, and men of action
CLEAR THE WAY!

JOHN BRUCE,
Inspector of Schools.

Essentials for a Successful Teacher.

APPRECIATING the end of his own being, the teacher himself wishes to *know*, that he *may do*. It is not merely knowledge for itself, for the mere sake of knowing, which is desired. This would be mere curiosity, which is by no means an elevated feeling. If one knew all the languages into which Babel has cleft the earth, and were that the end of his acquisitions, a day-laborer with a very moderate share of knowledge of his mother tongue, but who took the well-being into his thoughts and feelings, his plans and end, would be not only a better man in the moral aspects of the question, but also a better educated man, in the true sense of the word education. Nor is the knowledge sought because by the acquisition its possessor can become rich and powerful. This is mere selfishness, which is a base and sordid feeling; and wherever it gets the mastery, it renders a man so consciously base that, self-condemned, he excludes himself, as unworthy, from the society and converse of men of eminent virtue and philanthropy. But the thirst for knowledge which the good can approve is his who, while he does not ignore self, or seek to be better than our Lord required, since he commands us to love our neighbor as *ourself*, nevertheless wishes to know *much*, in order thant he may do more, which will be beneficial unto others.

In a word, then, the successful teacher must first have become a successful scholar. He must, in some way or other, have learned the lesson, and learned it thoroughly, that a man is not his own, having no relations or affinities to others. He is placed here to be rain and sunshine, fresh air and fragrance, food and flowers, any thing and every thing that is good and beautiful, consolatory and strengthening, reforming and purifying, unto every one that needs his help and unto whom he is able to render it. Let this big thought come down into the soul (and what contractillity must first have been overcome before this thought could find room in these shriveled, sunken souls of ours!)—let this big thought, I say, come down into the soul, and it converts the man at once into a most diligent learner. What must I do, and how can my duty be best done? are now the life-questions which are ever asked, and unto which ready answers are also ever vouchsafed;

for here he who asks receives, and he who seeks finds. And now, on the strength of the answers, you find him diligently prosecuting his work of preparation for future usefulness. Grammar, Georgraphy, Mathematics, Natural Sciences, Mental or Moral Philosophy, Latin or Greek, French or German, whatever it be whereby his usefulness can be promoted, is unweariedly pursued. Early and late you find him employed, and no figure of speech brings up so forcibly before us the desire which ever prompts his action as that just used by us when we spoke of a *thirst* for knowledge.

Now put the young man who has gone through such experiences into a school-room, and would you not expect him to succeed? Can you be near a fire and not get warm? Shall the sun shine, and darkness not flee away? Shall a young woman pass before you day by day into the school-room, who has consecrated herself for the good of the children to a life of weariness, bearing their perverseness and waywardness, and manifesting an unceasing regard for the welfare of her pupils, without becoming more fragrant to their moral senses than perfumes and spices are to our natural organs? Before such a teacher an unwillingness to study this subject or that would pass away as soon as the precept of the teacher, fortified by her own beautiful example, had taken hold of the tender heart of the pupil, and convinced him wholly that any study was to be loved and pursued according as it was fitted to make him better and more useful.

It is back of the school-room where the success may be gained, that the foundation of that success was laid. In the private chamber, where, seen only by God, he devoted himself to a life of usefulness: in the distant rural school-house, where, under many and almost insurmountable difficulties, he prosecuted his studies; in the rooms of this noble institution, where his industry and regard for every thing that is seemly and good has made his name almost a proverb,—in these spots his success was gained. Here he has sown: what remained for him was to go forth and reap his harvest.

A love for communicating knowledge. This, in the most successful teachers, is, in a greater or less degree, a natural gift. They are born teachers. They never knew when they did not love to teach. But this gift is also susceptible of high cultivation; and under those moral experiences, of which I have already spoken as giving life, energy and persistence to the thirst for knowledge, this love for communicating information becomes so intense that the mid-day meal will often be neglected for the pleasure of imparting knowledge. This it is that takes from the school-room now all that gloom and horror which, under the rule of some pedagogical tyrants, makes it appear as if it were draped in mourning. Under the smiles and sunshine of him who loves to teach, the school-room becomes to the pupil a place of pleasant and useful pursuits, and of joyful mastering of difficulties; the birth place of bright hopes and aspirations, and the spot to which memory, in after years, will look with a pure and serene joy. So well satisfied I am that the success of the teacher, in the highest sense of this word, depends on his own thirst for knowledge and his love for communicating, that if I were examining a teacher with a view to his employment, I should question him first and most fully on these two points; and if he was right here, I should feel that there was little reason to fear any deficiency in respect to mere book-learning. But if I should find that a hireling, an impostor, had come to be examined, a man or—oh, tell it not in Gath!—a woman, who neither loved children nor loved to teach them, I should expect to find him deficient also in the mere learning of books: and I should most assuredly try to find out his deficiencies, if he had any, and with heartfelt joy would see him turn his back—and with hearty good-will would help to turn his back—on the school-house of my or any other district. For if there is any one thing, short of the immediate frown of Deity, which more than another a parent may deprecate, it is the subjugation of his children to the tyrannous, soul-shriveling rule of a man or woman who, for six hours of the day, and for six days of the week, has under his care—care, indeed!—oh, sad misnomer!—the susceptible minds of children, to train them to the love and pursuit of those things which he himself hates.

Aptness to teach is the last element of the character of the successful teacher which I shall name.

It has been said that "what we know thoroughly we can usually express clearly, since ideas will supply words." If this statement is correct—and I believe it is,—then our teacher, with his thirst for knowledge and his love of communicating it, will almost of necessity fall into an easy, simple, clear method of communicating his thoughts, which will make teaching as natural and easy as the putting-on of an old glove. There will also be such a hearty sympathy between him and his pupils, almost by intuition he will see what is needed to make the lesson of to-day clearer and more impressive; and what was seen to be difficult to-day, the zeal and intelligence of the teacher will supply to-morrow. I never, indeed, knew a hearty teacher who did not thus become apt to teach. I have known those who, at first, were slow of speech, and through diffidence hesitated much; at times, too, thoughts were given forth confusedly, and hence they failed at first to interest the children. But these difficulties soon disappeared before the zeal and industry of the teacher, who loved his work, and was resolved to succeed. He who himself thirsts for knowledge soon learns that right methods of study are essential to progress; that there is also a right and a wrong way of putting things, and that when the right method is used instruction glides gently into the understanding, wins the love of the heart, and then calls forth the prompt activities of the will. The whole man in the scholar awaits the bidding of the earnest, intelligent loving teacher.—*American Educational Monthly.*

OFFICIAL NOTICES.



APPOINTMENTS.

SCHOOL COMMISSIONERS.

His Excellency the Administrator of the Government in Council was pleased, on the 20th October, 1865, to approve of the following appointments of School Commissioners, viz.:

County of Gaspé.—Ste. Adélaide de Pabos: Mr. Herménégilde Tétu.

County of Beauce.—Forsyth: Rev. Honoré Desruisseaux, Thomas Morel de la Durantaye and Hippolite Boutin, Esquires.

County of Arthabaska.—Tingwick: Messrs. François E. C. Proulx and Martin Corby.

Same county.—St. Norbert: Mr. Daniel Talbot.

County of Ottawa.—Hartwell: Messrs. Pierre Pilon, Bénoni Proulx and Hilaire Lavallée.

County of Portneuf.—St. Bazile: Messrs. F. X. Mollard, François Boutel, William Shanahan, Jr., W. Paquin and Félix Richard.

County of Dorchester.—St. Edouard de Frampton: Messrs. Henry Courtry, Thomas Lapointe and Rev. Hyacinthe Gagnon.

TRUSTEES OF DISSENTIENT SCHOOLS.

His Excellency the Administrator of the Government in Council was pleased, on the 20th October, 1865, to approve of the following appointment of a Trustee of Dissentient Schools:

Three Rivers.—Mr. James Shortis.

DIPLOMAS GRANTED BY BOARDS OF EXAMINERS.

MONTREAL BOARD OF PROTESTANT EXAMINERS.

1st Class Academy (*E.*)—Mr. John N. Muir.

1st Class Model School (*E.*)—Messrs. Solomon Falkner, Donald McMaster, Solomon W. Young, and Miss Charlotte Maria Smith.

1st Class Elementary (*E.*)—Misses Mary Cladwell, Annie Conoley, Grace Graham, Susan Grimshaw, Jemima Hartley, Elizabeth Hyatt, Catherine Irwin, Mary Jane Lindsay, Catherine McCormick, Catherine McGibbon, Jane McIntyre, Jessie McLaren, Sarah Odell, Rebecca Scales, Adaline Eliza Seely; (*E. & F.*)—Mr. William Henry Wadleigh.

2nd Class Elementary (*E.*)—Miss Eliza J. Gibson.

September 23, 1865.

T. A. GIBSON,
Secretary.

BOARD OF EXAMINERS OF THREE RIVERS.

1st Class Model School, (*F.*)—Miss Marie Exilia Deshayes and Miss Marie Délima Guilmet.

2nd Class Model School, (*F.*)—Madame L. M. E. Toulin de Courval.

1st Class Elementary, (*F.*)—Misses Beatrix Désillets, Marie Camille Gauthier, Marie Anne Lamanger, Ernestine Ouellet and Marie Louise Plourde.

2nd Class Elementary, (*F.*)—Misses Marie Adeline Caya, Emélie Michel, Marie Adèle Morel, Rose-de-Lima Poisson.

August 1, 1865.

J. M. DÉSILETS,
Secretary.

BOARD OF EXAMINERS OF GASPÉ.

1st *Class Elementary*, (*F.*)—Mr. Alexis Ouellet.

August 1, 1865.

T. Vibert, Jr.,
Secretary.

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SITUATION WANTED.

A teacher with the degree of B. A., and the holder of a diploma from the Montreal Board of Protestant Examiners authorizing him to teach in academies, is desirous of obtaining a situation. Enquire at this office.

JOURNAL OF EDUCATION.

MONTREAL (LOWER CANADA), OCTOBER AND NOVEMBER, 1865.

The Council of Public Instruction.

The Council of Public Instruction for Lower Canada held its half yearly meeting on the 12th October. The Honorable the Superintendent of Education having formally announced to the Council the death of their late President, Sir Etienne Paschal Taché, and having also paid a just tribute of respect to his memory, moved the following Resolution, which was seconded by Rev. Mr. Dowd and unanimously agreed to:

That the members of this Council have heard of the death of Sir Etienne Paschal Taché, the late Premier and President of the Council of Public Instruction, with profound sorrow, and that they desire to place on record in the archives this their formal expression of the love and respect with which they had ever regarded him, and also of the sorrow felt at the loss of one that, notwithstanding the calls of so many pressing engagements, had still found time to preside even at the last meeting; of one that had never ceased to take an interest in the progress of education nor to labor assiduously for its success.

On motion of J. Crémazie, Esq., LL.D., seconded by C. Delagrave, Esq., it was unanimously

Resolved,—That the foregoing Resolution be published in *le Journal de l'Instruction Publique* and the *Journal of Education*, and that a copy be transmitted to Lady Taché, together with an address of condolence on the part of the members of this Council.

On motion of the Hon. the Superintendent, seconded by Rev. Mr. Dowd, C. S. Cherrier, Esq., LL.D., Q.C., was chosen President, in the room of the late Sir Etienne Taché.

Mr. Cherrier having alluded with much feeling to his predecessor in office, accepted the charge and returned thanks to the Council.

The Council then proceeded to the consideration of other business. The decisions that were arrived at will be published when they shall have received the approval of His Excellency the Administrator of the Government.

Judicial Decision.

We have already acquainted our readers with the decisions of Judge Coursol and Judge Short as regards the question which came up before each, concerning the right of non-residents to become dissentients and pay their school taxes to the trustees of the religious minority to which they belong. Judge Coursol's judgment was in favor of the dissentients, but that of Judge Short was the reverse. Judge Sicotte, who recently decided the same point, also gave judgment in favor of the dissentients, that is to say against Judge Short's ruling. The case was between the School Commissioners of St. Bernard de Lacolle and J. C. Bowman, in the District of Iberville, and the *St. John's News* promises a full report, for which we will endeavor to find a place in our next.

The New Inspectors of Schools.

The *Presbyterian*, in its last issue says: "One change is being managed quietly and apparently unnoticed, that, namely, of dividing up the districts of School Inspectors in the Protestant parts of Lower Canada and making new districts for Roman Catholic Inspectors," and "that already FOUR of these new appointments have been made."

It is true that FOUR inspectors were recently appointed, but the facts are as follows.

1st. When Inspectors of Schools were first appointed, that is to say in 1851, Protestant and Catholic inspectors were jointly appointed for the cities of Quebec and Montreal; this was done at the request of the Protestants, and, as the Catholic population was a large majority, it was evident that if but one inspector had been appointed for each, these inspectors would have been Catholic. Protestant inspectors were appointed for the Eastern Township counties and Catholic inspectors for all the other districts.

2nd. On the resignation of Mr. McCord, a Catholic, who was inspector for the counties of Ottawa and Pontiac, the Protestant population insisted on having a Protestant inspector; at their request the district was divided and a Catholic and a Protestant inspector were appointed. This was in June 1861.

3rd. About the same time the Catholics of the Eastern Townships, who had become very numerous and who in several counties are now a majority, sent in petitions to the Government and to the Education Office to obtain Catholic Inspectors. It was only very recently, that is to say in March last, that something was done towards granting their request.

4th. The FOUR inspectors recently appointed are: 1st. Mr. McGrath, a *Protestant*, to inspect the Protestant schools of the Counties of Ottawa and Pontiac, *vice* Mr. Hamilton, also a Protestant, who had resigned; 2nd. Mr. Alexander, a Catholic, *vice* Mr. Bourgeois, also a Catholic, who had resigned. In addition to the district which had been assigned to Mr. Bourgeois, Mr. Alexander is to inspect the Catholic schools of the county of Shefford in Mr. Parmelee's district, leaving the Catholic schools of the counties of Brome and Missisquoi still under Mr. Parmelee's care; 3rd. Mr. Stenson, a Catholic, is appointed for the Catholic schools of Mr. Hubbard's district; and 4th. Mr. DeCazes, a Catholic, replaces Mr. Leroux, also a Catholic (dismissed), for a district almost exclusively Catholic.

The following extract from a series of articles already published in this journal, will show how matters stood previously to these appointments, and also, that while very few Protestant schools are now under the inspection of Catholic inspectors, there are still a great many Catholic schools under the inspection of Protestant inspectors in the districts assigned to Mr. Parmelee and Mr. Hume:

"The next grievance alluded to in the Report is that 'Protestan schools are examined by Roman Catholic Inspectors who do not understand the English language, and who cannot therefore make correct reports concerning them, though desirous to be impartial; and that sometimes rewards are given (to Protestant children we suppose) connected with the Roman Catholic faith.'

For every one who knows something of Lower Canada, it is easy to see that with a mixed population like ours, and with Protestant schools scattered at great distances from each other to Catholic districts, and *vice versa*, it is almost impossible that the schools belonging to one religious denomination of the community should not sometimes be visited by Inspectors of a different religious persuasion.

The first division of districts was made to secure to all large sections of the Protestant community the advantage of having Inspectors of their own faith, and every thing that has been done since was with

a view of extending that principle as far as possible. It is thus that when Inspector Hubbard was appointed, on the death of the late Mr. Childs, the Protestant schools of the Townships of Chester Tingwick, Kingsey, and Durham (in the district of Mr. Bourgeois,) were assigned to him; the Dissentients of St. Foy, near Quebec, were also, at their own request, placed under the control of the Rev. Mr. Plees; and when Mr. McCord (a Catholic) retired from the inspectorship of the counties of Ottawa and Pontiac, two inspectors, a Catholic and a Protestant, were appointed in his stead.

The following table of the Catholic and Protestant populations forming the districts of the Protestant Inspectors, shows that if there is good ground for complaint, it certainly falls to the lot of the Catholic and French-speaking population.

Inspectors and Counties.	Protestants in each county, or part of county.	Total of Protestants in each district of inspection.	Catholics in each county, or part of county.	Total of Catholics in each district of inspection.
Inspector Hume.				
Megantic	5046	......	12843	......
Part of Beauce	1	......	4498	......
do Dorchester	832	5879	2581	19922
Inspector Plees.				
City of Quebec	9632	......	......	......
Part of the county of Quebec	1299	10931	......	......
Inspector Hubbard.				
Stanstead	10121	......	2137	......
Richmond	5859	......	3025	......
Compton	7824	......	2386	......
Wolfe	999	......	5549	......
Sherbrooke	3296	......	2603	15700
Part of Drummond and Arthabaska	3234	31333	......	......
Inspector Parmelee.				
Brome	10192	......	2540	......
Missisquoi	11153	......	7455	......
Shefford	5562	26907	12217	22212
Inspector Bruce.				
City of Montreal	24427	......	......	......
Huntingdon	9471	......	8040	......
Part of Chateauguay	3416	......	......	......
do Argenteuil	7418	44712	4427	12467
Inspector Hamilton.				
(Inspectorship vacant.)				
Ottawa	7864	......	......	......
Pontiac	6002	13866	......	......
Grand total	......	133628	......	70311

If we now deduct from the total Protestant population of Lower Canada (168,313) (1) the Protestant population under the supervision of Protestant Inspectors, we shall find that 34,685 Protestants only have their schools visited by Catholic Inspectors, while 70,301 Catholics are subjected to a disadvantage of the same nature. These 34,685 Protestants are scattered over the whole surface of Lower Canada, and all groups of Protestant population that could be placed under the control of Protestant Inspectors, with the present staff and present salaries, have had that benefit. Not so with Catholics. In Messrs. Hubbard, Parmelee and Hume's districts, the interests of large, compact French and Catholic populations are entrusted to the care of Protestant and English-speaking Inspectors. In Mr. Parmelee's district the Catholics are nearly one half, and in Mr. Hume's they are more than three fourths of the population.

(1) In our calculations we give Protestants all that are not reported as Catholics, including Jews, persons without a creed, and persons of creeds unknown.

The views of the present Superintendent on this subject are contained in the following extract from his special report of the 23rd April 1863, on the Inspection of Schools, printed by order of the Legislative Assembly.

'I have drawn up a table marked B. containing a plan of inspection on the footing of ten districts only, and comprising approximately the same heads of information with respect to them as the other table does for the old districts. I believe that it would be impracticable to throw the country into larger districts than are comprised in this table, even if the number of visits were reduced to one in the year. We might indeed further reduce the number of district to eight, if we disregarded the difference between Catholic and Protestant communities; but I could not in this respect recommend a deviation from the system introduced and by me sought to have extended. The aim of our educational legislation is to give the most, the best possible guarantee to religious minorities in the education of their children. We have separate schools, separate Boards of Examiners as far as practicable, and it seems to me that as nearly as may be, we ought to have separate Inspectors. In Prussia and everywhere else throughout Germany the Inspectors are even members of the respective clerical bodies. In England and Scotland there are Inspectors for each religious denomination; and provision is even made by Order in Council that the heads of the different religions bodies shall have a voice on the choice of them.'

This report was made at a time when the abolition of the office of inspector having been proposed in Parliament, the administration of the day was considering the propiety of modifying the system, either by reducing the number of Inspection districts, or by leaving the appointment and the payment of Inspectors to the Municipal Councils. The frequent changes which have since taken place in the government, and the all absorbing questions which have been and are still discussed, may explain how the matter has remained in abeyance.

Meanwhile the above mentioned circumstances may account for the unusual length of time during which two Inspectorships (one a Catholic, the other a Protestant) have been suffered to remain vacant. The same reason may also apply in the case of the Catholics of the Eastern Townships who have petitioned the Government for the appointment of a Catholic Inspector."

The Grammar Schools of Upper Canada.

We copy from the *Upper Canada Journal of Education* the two following articles on the Grammar School system of the Upper Province. It has been frequently observed that some system of the kind might be advantageously substituted for our present system of Superior Education. We are not, of course, expected to offer any opinion on this subject until the Government shall have undertaken to change the present system. We merely place the information contained in the following articles before our readers, so that they may better understand the nature, origin and progress of the institutions referred to.

The New Grammar School Act of 1865.

The giving of the Royal Assent to the new Grammar School Act by the Governor General, and the subsequent reference to the value of the measure in His Excellency's Speech from the throne, marks an important epoch in the history of educational progress in Upper Canada. The Hon. William McDongall, Secretary of the Province, in his capacity of Minister in charge of Education, deserves the cordial thanks of the educational authorities in Upper Canada for his active exertions in getting this Bill through the Legislature. In conferring on the subject with the officer from the Educational Department having charge of the matter at Quebec, he devoted a good deal of time to a careful consideration of Grammar School Education in Upper Canada, and sought in various ways to render the Bill under consideration as practical in its objects as possible.

Some valuable improvements were made in the original draft of Bill by Mr. McDougall. Among others is the section relating to Elementary Military Education in Upper Canada. This section was highly approved of by the Adjutant General of Militia, and cannot fail to add to the influence of the Grammar Schools. It will be found to be the first practical step which has been taken in the direction of a permanent and systematized plan of military instruction for the youth of our country, to be followed up in some future Canadian Sandhurst or West Point Military Academy yet to be established. Such an Academy must eventually supersede the present temporary system of local Military Schools which are now established at a considerable aggregate cost in various parts of the Province.

Few, except those practically acquainted with the state of the Grammar Schools, can form an idea of the great service which the new Grammar School Act will render to the cause of intermediate education in Upper Canada. Before the beginning of the present year, many of the Grammar Schools were doing little more than Common School work; and some of them even did this work very imperfectly. The effect of the new regulations, which went into operation this year, has been, we are happy to say, very materially to improve the condition of most of the inferior Grammar Schools; while, under the provisions of the new Act just passed, the managers of these schools will still further feel the necessity of confining them exclusively to their own legitimate work. This work they will be required to do *bonâ fide*, to the best of their ability, in order to be entitled to the right to compete for a share in the Legislative Grant. The system of apportioning money to the Common Schools, according to the basis of average attendance of pupils therein, has been found to have had a most salutary influence not only upon the attendance of children at the schools, but also upon the character of the instruction given and the length of time in the year during which the schools have been kept open.

A great drawback to the advancement of the Common Schools, especially in rural villages, has been the facility with which some of the so-called Grammar Schools could interfere with and even reduce the standard of education below that of an ordinary Common School. Under the new Act, however, the Grammar School standard of Education will be definitely fixed and uniformly maintained in all of the schools; while the efforts of the Department can now be directed without hindrance to raising the standard of the Common Schools, so that both classes of schools will be enable to perform their own work without clashing with each other. There are other projects under consideration for the improvement of the condition of the schools, and rendering their inspection more systematic and thorough, which are not yet matured, but which will be publicly discussed in due time.

The following analysis of the new Act we take from the editorial correspondence of the *Montreal Gazette*, written during the time the Bill was under the consideration of the Legislat re:

"Mr. McDougall has brought in a Bill respecting Grammar Schools, for which he deserves credit. Heretofore these institutions have been supported by grants from the Provincial chest without exacting local contributions. Hereafter the counties are to be called upon to contribute half as much as the Provincial grant, and no school can be hereafter opened with a less grant than $300. This insures that the minimum income shall be $450, a sum still rather too small to secure the amount of ability and erudition necessary for an efficient Grammar School. It is provided also that, except in the case of teachers already licensed and teaching, the teachers of the Grammar Schools must hereafter be graduates of some University within the British dominions; and the curriculum is to be prescribed by the Council of Public Instruction, so as to prevent an abuse only too common in both sections of the Province, of degrading Grammar Schools into Elementary Schools, by filling them up with pupils learning their A B C. It were much to be desired that similar provisions to these should be extended to the so-called Academies and Grammar Schools of Lower Canada. It is high time a thorough revision of these grants should take place. But a feature in this bill, for which Mr. McDougall deserves special praise, is this—that he provides that the Governor in Council may establish a curriculum of elementary military studies to be used in the Grammar Schools, and that every teacher who shall pass an examination to show himself qualified to impart instruction in those studies, and secure a class of not less than five pupils in them, shall receive $50 addition to his salary in each year. This is decidedly a step in the right direction. The present military schools are admirably answering the temporary purpose of providing the first set of officers for the Militia. But the work must be permanently done by other methods, the supply of educated military men maintained by another organization. Our schools receiving Government money must all teach drill. Our Grammar Schools and Academies must all teach the elements of military science, and attached to one or two of the Universities or as a separate institution, we must have at least one great Military School where men may receive as high and perfect a military training as West Point or Sandhurst now gives. Perhaps for a time scholarships at Sandhurst might serve the purpose. It is a matter for congratulation, therefore, that so important a step in the right direction has been taken. We may hope to see the work gradually extended year by year."

Progress of Grammar School Education in Upper Canada.

With a view to furnish our readers with a brief view of the history and progress of Grammar School Education in Upper Canada, we insert the following summary sketch which we have prepared on the subject:

In 1789, in compliance with a memorial presented to Governor-General Lord Dorchester, praying for the establishment of a public school near Cataraqui (Kingston)—the most central part of Upper Canada—he directed the setting apart of land for the endowment of schools in the new townships in that part of the Province; but no school was actually established at that time.

In 1792, a private Classical School was established at Newark (Niagara), and in 1796, one was established at York (Toronto).

In 1797, the subject having been brought before the Upper Canada Legislature by Governor Simcoe, on a despatch received from the Duke of Portland, a memorial was sent to the King, praying for the grant of a sufficient quantity of land to endow a Grammar School in each of the four districts into which the new Province was divided, and a University for Upper Canada. The prayer of the memorial was granted; and 500,000 acres of land were set apart for the purposes specified. In 1798, President Russell requested his Executive Council, the judges and the law officers of the Crown, to submit to him a scheme of education for the Province. They did so; and recommended a sum of money to be granted for the erection of a schoolhouse at Kingston, and in the Newcastle District, for the accommodation of 100 pupils, with a residence for the master. They also recommended that a University be erected at York. The claims of Cornwall and Sandwich for a school were, in the meantime, to remain in abeyance. Nothing was done, however, except to bring out from Scotland, Mr. (now the Right Rev. Bishop) Strachan, as President of the proposed college. Before Mr. Strachan arrived, however, the project of the college was abandoned, Governor Simcoe went to England, and Dr. Strachan opened a school at Kingston and subsequently one at Cornwall.

In 1806, a temporary Act was passed, establishing a Public School in each of the eight districts into which Upper Canada was divided, and granting £100 per annum for each teacher. In 1807-8, this Act was made permanent.

In 1817, Common Schools were first established by law in Upper Canada.

In 1819, another District School was opened; and provision was first made for holding public examinations—for reporting on the condition of the schools to the Government and for educating ten Common School pupils as free scholars at each District School. The allowance of £100 was reduced to £50 wherever the number of pupils did not exceed ten.

In 1823, a Provincial Board of Education was established. In 1824, the germs of a library system were developed. Subsequently, and down to 1839, other steps of progress were made.

In 1839, the terms "District School" were changed to those of "Grammar School;" and £200 were offered to each District which would raise an equal amount for the erection of a Grammar School building. £100 were also offered for the establishment of a school in each of four towns (not nearer than six miles to the County Town) at which not less than sixty pupils were to be educated.

In 1853, the present Grammar School Act was passed. To render the transition from an old to a new system more easy, many of the provisions of the former Grammar School Acts were retained. For instance, (1) the distinction between senior and junior County Grammar Schools—(2) the granting of £100 to each senior County Grammar School over and above that given to a junior school, on condition (3) that the daily average number of pupils reached ten, and £50 in case the average was below ten. These senior schools were, however, required to make meteorological returns to the Educational department.

In order to see what has been the gradual progress in the number of Grammar Schools in Upper Canada and the number of pupils attending them, we append the following table :—

In the Year	No. of Schools.	No. of Pupils.	In the Year	No. of Schools.	No. of Pupils.
1844	25	1,000 approx.	1864	95	5,590
1854	64	4,287	1865	101	5,700 estim.
1863	95	5,352			

Of the 5,590 pupils in the various branches of instruction in 1864, there were as follows :—

In the English branches	5,053
In Latin	2,102
" Greek	726
" French	2,828
" Mathematics	5,387
" Geography	4,963
" History	3,833
" Physical Science	2,911

In 1865, the number of pupils attending Grammar Schools from the

cities, towns, and villages (incorporated) are about	4,400
Ditto ditto from Counties	1,300
Estimated total as above	5,700

—showing that while the new Act will give County Councils equal power with Town and Village Councils to appoint trustees, only one-fourth of the pupils attend from the rural portions of the country over which the County Councils exercise jurisdiction.

Twenty-sixth Meeting of the Teachers' Association in connection with the Laval Normal School.

This Convention was held on the 25th August last.

Present, Rev. Principal J. Langevin, Ptre.; Messrs. J. B. Cloutier, F. X. Toussaint, C. Dufresne, N. Lacasse, Ed. Carrier, C. Dion, E. Saint-Hilaire, F. X. Chabot, Ls. Roy, G. Labonté, P. Giroux, V. Bérube, Elz. Marceau, H. Tremblay, F. Fortier, O. Goulet, F. Morisset, C. Robitaille, J. Cloutier, Ls. Mercier, H. Rousseau, and a number of the pupils of the Normal School.

The President being absent, Mr. J. B. Cloutier, Vice-President, was called to the Chair.

The minutes of last meeting having being read and adopted, the Principal lectured on *Mechanics* and the *Laws of motion*.

Mr. J. B. Cloutier then read a paper on *Geography*, in which he labored to show the great importance of that particular branch of learning and the best methods to be employed in imparting instruction therein.

The hour being now far advanced, the meeting adjourned to the following morning.

SECOND SITTING.

Present, Rev. Principal J. Langevin, Ptre.; Messrs. Inspectors P. M. Bardy and F. E. Juneau; Messrs. J. B. Cloutier, F. X. Toussaint, D. McSweeney, N. Lacasse, Ed. Carrier, C. Dion, G. Labonté, J. Létourneau, F. X. Gilbert, M. Ryan, E. Saint-Hilaire, A. Esnouf, C. Labrecque, M. Ahern, P. Giroux, F. Parent, F. X. Chabot, B. Garneau, V. Bérubé, P. Bourassa, F. Fortier, Frs. Pagé, J. Pelletier, G. Tremblay, F. Robitaille, J. Couture, F. Morisset, H. Rousseau, O. Goulet, Elz. Tremblay. S. Fréchette, Ls. Dion, P. Proveuçal, Ls. Mercier, J. Delisle, and a number of the pupils of the Normal School.

In the absence of Mr. Thibault, Mr. J. B. Cloutier was called to the Chair.

The following members were then elected office-bearers for the year: Mr. J. B. Cloutier, President; Mr. Ed. Carrier, Vice-President; Mr. E. Saint-Hilaire, Secretary; Mr. N. Lacasse, Treasurer; Messrs. C. Dion, Frs. Fortin, N. Thibault, C. J. L. Lafrance, C. Dufresne, A. Esnouf, D. McSweeney, F. X. Gilbert, and Frs. Parent, Committee of Management.

Mr. N. Lacasse then lectured on *Osteology*, showing the position of the different bones in the human frame from a skeleton in the possession of the Normal School.

Mr. Inspector Bardy read an essay on *Man*, in which he spoke of the greatness, power and genius of man in his primitive state.

The following subject was then debated: *What is the best method of teaching Geography?* The Principal, Messrs. Inspectors Bardy and Juneau, and Mr. F. X. Toussaint took part in the debate.

The Principal, at the request of the meeting, summed up the question substantially as follows: Geography should be taught in every school, that children may have a correct idea of different countries, their extent, climate, productions, objects of commerce, forms of government, manners and religion of their inhabitants; geography should be taught as soon as children are able to read; as to younger children the teaching should be confined to explanations with the aid of maps and globes, while an abridged work should be used for more advanced pupils. In this country that part of geography which should be taught first is that relating to this continent and more particularly to Canada, concerning which ample details should be given, and this should be done as soon as the child has acquired the rudiments. In model schools a more advanced course should be followed—the late Rev. Mr. Holmes' French Geography being recommended for the purpose, or, in English, Mr. Lovell's Atlas. Children should be taught to point out countries and localities with care, and not merely the names by which they are designated; the boundaries of different countries and the courses of rivers should also be pointed out. The teacher should be careful to explain the lesson beforehand from the map, and those children who have no atlas to study at home, should be allowed to look over the maps in school. Skeleton maps are preferable for the more advanced pupils. It is useful to accustom pupils to trace out maps, which can be done at first on black-boards.

Mr. Jos. Létourneau moved, seconded by Mr. Frs. Fortin, and it was accordingly

Resolved,—That a vote of thanks be tendered to the members retiring from office, for the able manner in which they have conducted the affairs of the association during the past year.

The Rev. Principal, Mr. Inspector Juneau, Messrs. Ed. Carrier and E. Saint-Hilaire promised to lecture at the next meeting.

The Principal proposed the following subject for debate at that meeting: *What is the best method of teaching the Rule of Interest?*

The Convention was then adjourned to the last Friday in January next, at 7 P.M.

Report of the Superintendent of Education for Lower Canada, for the Year 1864.

(*Concluded from our last.*)

At first the law gave discretionary power to the commissioners and trustees with respect to the engagement of teachers, and their dismissal and salaries. The great difficulties which the establishment of the schools presented at first may account for that legislation; but the abuses which resulted from it induced the Legislature to place some bounds to the power of the commissioners. By a summary petition addressed to the Superintendent, the dismissed teachers may, if they have been unjustly dismissed, obtain compensation, which is deducted from the share of the grant allotted to the municipality for the following half-year.

The Department has also revived a regulation made by my predecessor, which directed the commissioners to give three months' notice before the expiry of their engagement to teachers whom they did not intend to retain in office for another year.

Of the total number (743) of candidates, 110 were rejected and 633 were admitted; 6 with academy diplomas, 28 with model school diplomas, and 599 with elementary school diplomas.

The briefness of the term of engagement, a year at the longest, provides the commissioners with easy means of getting rid of an individual whose only fault is sometimes that of not having conciliated their personal friendship or having a rival in a male or female relation of some one of them.

Accordingly, it was decided that, failing the three months' notice, the engagement should be held as continued, and that the dismissal of a teacher in such a case would need to be justified by some grounds specified and admitted in the statute as sufficient. This decision of the Department has been frequently ratified by the Government. The courts of law have, moreover, decided that the dismissal of a teacher must always be authorised by the strictest principles of justice, and that the discretion permitted to the commissioners by no means exempts them from an action for damages on the part of a teacher, requiring them to prove the facts on which they rely to justify their proceeding.

It would appear that the teacher must be, by all these provisions of the law, very sufficiently protected from arbitrary and unjust dismissal. But if we believe this we know little of the ingenious spirit of persecution arising from the pettiest interests in some places. As a means of evading the law, and the regulations of the Department, it has been stipulated, in treating with teachers, that they should be made subject to dismissal at any moment and for any or no reason, or three months' notice has been given beforehand, and without distinction to all that their engagement would not be renewed, in order, as the commissioners thought, that their salaries might be reduced by offering the places to those willing to accept the lowest remuneration, and retaining none but those who would be satisfied with the smallest salaries. These stipulations and wholesale notices, having for their object the evading of the law and the regulations, have frequently been declared null and void, and the commissioners have been informed that when they have recourse to those practices they will forfeit all right to their share of the Government grant.

Notwithstanding this, but little progress has been made in the raising of the salaries of male and female teachers, and the question has been long discussed, and is still being discussed in the associations of teachers and in the newspapers, whether it would not be expedient to fix a *minimum* of salary; but besides that that *minimum* would have to be fixed at a low rate, with the alternative of seeing closed an even greater number of schools than were closed in the course of the past and of the present year, in consequence of the determination which was come to no longer to tolerate teachers not holding diplomas, there would also be this disadvantage that many municipalities in

which higher salaries are at present given would content themselves with the *minimum*, which, as Mr. Inspector Dorval remarks in his report, would speedily become a *maximum*.

The increase in the school-rates may cause it to appear strange that there is so little increase in the salaries of the lay female teachers: but this increase serves in part to counterbalance the diminution of the grant to each municipality in consequence of the total grant remaining the same. It must be observed, moreover, that it is precisely in those parishes in which the largest amount is collected in school-rates, and where, by consequence, male and female teachers might be liberally remunerated, that there exist academies or boarding schools, directed by persons belonging to religious orders, or academies under the control of trustees and beyond that of the commissioners.

The following table of school-rates since the year 1856 exhibits continuous and steady progress. It is to be remarked, however, that all the taxes imposed are not always regularly collected. The Department, in a direct manner, and also through the school inspectors, endeavors to impart an impulse to the collection of these rates; and in the case of localities where there is real negligence in this respect, payment of the grant is suspended. Generally, according to the reports of the inspectors, and the accounts sent in by the commissioners, there is a greater degree of activity in the collection of arrears. In some parishes considerable amounts have been collected within a few years.

The difference between the rates collected in 1853, amounting to $165,843, and those of this year, which amount to $593,264, gives proof of very great improvement in the disposition of the population in relation to public education. The increase in the land assessments over those of 1863 has been $15,055, and that in the monthly fees has been $13,399, making a total of $28,454—a more considerable increase than that of the preceding year.

TABLE of Assessments imposed annually since the year 1856.

	1856.	1857.	1858.	1859.	1860.	1861.	1862.	1863.	1864.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Assessment to equal the grant.........	113884 87	113887 08	115185 09	115792 51	114424 76	113969 29	110966 75	110534 25	112158 34
Assessment over and above the grant...	93897 90	78791 17	88372 69	109151 96	123939 64	130560 92	134033 15	134888 50	144515 61
Monthly fees........	173488 98	208602 37	231192 65	251408 44	249717 10	264689 11	281930 23	307638 14	321037 30
Assessment for the erection of buildings.	25493 80	22928 63	24646 22	22083 57	15778 23	17000 00	15798 84	11749 76	15553 12
	406765 55	424209 25	459396 65	498436 48	503859 73	526219 32	542728 97	564810 65	593264 37

The following table gives an abstract of the general results obtained, according to the statistics, since 1853; but it is well to observe that the total of fees paid in the colleges, and many other sums expended for education, are not included in it.

TABLE of the Progress of Public Instruction in Lower Canada, since the year 1853.

	1853.	1854.	1855.	1856.	1857.	1858.	1859.	1860.	1861.	1862.	1863.	1864.	Increase over 1853.	Increase over 1858.	Increase over 1863.
Institutions	2352	2795	2868	2919	2946	2985	3199	3264	3345	3501	3552	3604	1252	619	52
Pupils................	108284	119733	127058	143141	148798	156872	168148	172155	180845	188635	193131	196739	88455	39867	3608
Fees ....$	165848	238032	249136	406764	424208	459396	498436	503859	526219	542728	564810	593964	428116	134568	29154

The increase in the number of educational institutions of all classes over last year is only 52; that of the total number of pupils is only 3,608. As I have already pointed out, the necessity of requiring male and female teachers to be holders of diplomas in all places, without exception, as provided by law, has of late years caused the closing of a certain number of schools in some districts. In others, in which population increases slowly, the number of pupils attending the primary schools is nearly as great as can be expected under the very unfavorable circumstances in which they are situated, in consequence of the severity of the climate, the remoteness of the families, scattered sometimes at great distances, and the poverty of the inhabitants. There are, however, still many places in which the absence of the children from school is to be attributed to the apathy of the parents, independent of the wants and difficulties which an agricultural population, a part of which is poor and compelled to engage in severe labor requiring the services of all the family, experience in this respect.

The schools are now as numerous and as generally dispersed through the municipalities as is desirable for their efficiency, and possibly more so. It has, therefore, become necessary to suppress all those which are not attended in a satisfactory manner, and to attach the sections containing them to adjacent sections. The action of the Department has been taken with this object in view, and the same course will be followed in future. It has already happened that, the attention of heads of families having been called by this means to the necessity of sending their children regularly to school, if they are desirous of retaining it in their midst, there has been some improvement; and in any case it is but just to suppress schools which are not sufficiently attended, and which entail too great expense in proportion to the results which they produce.

The levying of the monthly fees, which should be effected indiscriminately for children who do not attend the schools, as for those who attend them, is one of the most certain means of obtaining a regular and numerous attendance. The indulgence shewn to certain

municipalities which levied, by means of assessment, an additional sum to make up for the monthly fees, should be discontinued, if the attendance at their schools does not become more general.

The following table of the number of children learning the most important branches of primary education shews a considerable increase for this year in respect of history, geography, parsing and French grammar. Last year there was a diminution in respect of English grammar; this year there is an increase. The diminution of 2,221 in the number of pupils reading well appears to me difficult to explain. Had the diminution been gradual, it might have been attributed to a difference of appreciation on the part of the masters or the inspectors:—

COMPARATIVE TABLE, shewing the number of children learning each branch of instruction, since the year 1853.

	1853.	1854.	1855.	1856.	1857.	1858.	1859.	1860.	1861.	1862.	1863.	1864.	Increase over 1853.	Increase over 1858.	Increase over 1863.	Diminution from 1863.
Pupils reading well	27367	32861	43407	46940	48833	52090	64362	67753	75236	77108	77676	75555	48188	23456	....	2221
Pupils writing	50072	47014	58033	60086	61943	65404	80152	81244	87115	92572	97086	99351	49279	33947	2265	....
Learning simple arithmetic	18281	22897	30631	48359	52845	55847	63514	63341	69519	74518	75719	84197	65916	28350	8473	....
Learning compound arithmetic	12428	18073	22586	23431	26643	28196	30919	31758	41812	44357	45727	46529	34101	18333	802	....
Learning book-keeping	.....	799	1976	5012	5500	6689	7137	7319	9347	9614	9630	9615	9615	2926	....	15
Learning geography	12185	13826	17700	30134	33606	37847	45393	49462	55071	56392	60585	66412	54227	28565	5827	....
Learning history	6738	11486	15520	17580	26147	42316	45997	46324	51095	54461	59024	66894	60056	24578	7870	....
Learning French grammar	15353	17852	23260	29328	39067	43307	53452	54214	60426	61314	63913	68564	53211	25257	4651	....
Learning English grammar	7066	7097	9004	11824	12074	15348	19773	25073	27904	28462	27358	29428	22362	14080	2070	....
Learning parsing	4412	9283	16439	26310	34064	40733	44466	46872	49460	50893	52244	60311	55899	19578	8067	....

As the rights of the dissentients have for some time been a subject of discussion in this part of the Province, I here annex a table of the dissentient schools, both Catholic and Protestant, with the numbers of the pupils belonging to them respectively. By this it will be seen that the Catholics have an interest in the separate schools as well as the Protestants, although neither schools nor pupils equal those of the latter in number.

TABLE of Dissentient Schools and their Pupils.

NAMES OF SCHOOL INSPECTORS.	No. of Catholic dissentient schools.	No. of pupils.	No. of Protestant dissentient schools.	No. of pupils.
J. B. F. Painchaud	....	....	1	22
Rev. R. G. Plees	....	....	4	129
J. Meagher	1	53	2	111
T. Tremblay	....	....	1	25
Vincent Martin	....	....	....	....
G. Tanguay	....	....	....	....
S. Boivin	....	....	....	....
John Hume	3	120	4	136
P. F. Béland	....	....	1	35
F. E. Juneau	....	....	3	142
J. Crépault	....	....	....	....
P. M. Bardy	....	....	3	119
P. Hubert	....	....	3	115
G. A. Bourgeois	....	....	5	161
B. Mauranlt	....	....	....	....
H. Hubbard	3	110	....	....
R. Parmelee	24	841	14	304
J. N. A. Archambeault	....	....	3	114
————	....	....	6	124
Michel Caron	....	....	20	667
L. Grondin	....	....	11	443
John Bruce	15	629	6	290
F. X. Valade	....	....	20	684
A. D. Dorval	1	55	7	219
C. Germain	1	22	7	252
C. B. Rouleau, Catholic dissentient	....	....	....	....
Protestant district of Ottawa and Pontiac	....	....	13	533
	48	1830	134	4625

I had the honor to submit to the Government the draft of a Bill to settle the difficulties existing, relative to the interpretation of the clauses respecting the distribution of the taxes of non-residents, and those of corporations or incorporated companies.

Independently of the obscurity or insufficiency of some of its clauses on many other points, the law contains, moreover, other contradictory provisions. The frequent amendments which have been made would seem to call for a complete revision of it, and the passing of a new law.

In the process of revision, however, the less variation or departure it made from the general principles of the present school law, the more secure we should be of a favorable result.

The most urgent want of this Department is that which I have constantly represented—the regulation, namely, of its financial difficulties. These difficulties existed previous to 1855, before my appointment to office and the passing of the law of Superior Schools. The Legislature voted an annual grant for superior education, but with a proviso that only a certain portion of the amount should be receivable from the Consolidated Revenue of the Province, while the residue should be a special charge on the Jesuits' estates and on the balance of the grant for common schools. Now, the sums voted every year being always in excess of the two last-mentioned sources of supply, a considerable deficit was the result. The passing of the law for superior education continued the same state of things; the provisions of that Act, relative to the sources from which the funds for its support were to be derived, not differing in any respect from those which are the subject of my remarks. The portion of Lower Canada in the annual supplementary grant for common schools is exhausted, without the possibility of increasing the allowance to those schools; nay, a deficit remains, which now nearly equals the capital of the fund for superior education. It follows that it is very difficult to increase the different grants which I have, in this as in many previous reports, represented as insufficient.

In the list of the improvements which are thus delayed is the formation and the increase of parish libraries, the allowance for which cannot be deducted, in the present state of things, from the primary school fund, already insufficient. Such institutions are, nevertheless, of the highest importance. In all other countries the establishment of such libraries is considered as essential for the completion and confirmation of popular education; and I had the honor to mention in my last year's report the efforts recently made in France to found and develope such institutions.

For the reasons above stated, it has also been impossible to afford any relief for the erection or repairs of schoolhouses; and this is so much the more to be regretted, that in affording such relief an opportunity would arise of insisting on improved methods of erecting and laying out such buildings, which are much needed.

To conclude: both the ordinary grant for common schools and the supplementary aid to poor municipalities stand in need of an increase, for this, the strongest reason of all, that while the amount for distribution remains the same, the subsidy to each municipality is from

time to time diminished, as new ones become claimants, or the population in certain of them increases, though it remains stationary in others.

This is the more to be regretted, that the withholding of payment of the grant is the most effective—nay, we may term it the only effective—means which the Department possesses to enforce the observance of its instructions and regulations; and that the smaller the grant is in amount the less the influence which it confers is regarded.

I have the honor to be, sir,

Your obedient servant,

PIERRE J. O. CHAUVEAU,

Superintendent of Education.

Extracts from the Reports of the School Inspectors for 1861 and 1862.

(*Continued.*)

Extracts from the Reports of Mr. Inspector GRONDIN.

COUNTIES OF BEAUHARNOIS, LAPRAIRIE AND CHATEAUGUAY, LESS THE PROTESTANTS OF ORMSTOWN AND ST. JEAN CHRYSOSTOME.

(*First Report concluded.*)

It is to be regretted that in many places the school-houses are not provided with the dependencies necessary for the comfort of the teacher and his family, and that in some places they are not sufficiently roomy, thus exposing the health of master and pupils to injury.

Unfortunately for the school municipality of Ste. Cécile, which, last year, had a model school and three good elementary schools in operation, under control, the rich and influential seignior of the place, who is also the proprietor of more than half the farms in the parish and of about forty building lots in the village, refuses to pay his share of the school rates, and is carrying on a long and expensive suit against the school commissioners which has already compelled them to close several schools and, in consequence, to deprive more than 200 children of the benefits of education.

I have followed your instructions as to the distribution of the books which you sent to me to be given as prizes in the schools.

The account books and minutes of proceedings are generally well kept by the Secretary-Treasurers of the various municipalities. The teachers are also better paid than formerley, though some still complain of irregularity of payment. During my visit for the first six months of 1861, which has already commenced, I shall pay special attention to monetary matters, and will see that all the Seretary-Treasurers make up their accounts in conformity with the 10th clause of the Act 14 and 15 Victoria, chapter 97.

Second Report.

I am happy to be able to state that education is progressing in a very satisfactory manner in this district, and of this you may satisfy yourself by comparing my preceding statistical tables with those which accompany this report. In justice to several schools, I must say that they have improved beyond my expectation.

These results, however, must not cause us to forget that very important improvements are still necessary, and more especially in the construction of the school-houses. These improvements, left to the will of the school commissioners, will probably be carried out, but at a period more or less remote.

The mutual-simultaneous sytem of instruction should also be introduced into all our schools, in spite of the opposition which would at fist be made by some who are more prejudiced than ill-disposed, and who believe that a pupil loses all the time which he spends in teaching others, and that he learns nothing when taught by any other than the master himself.

I will now proceed to review each municipality, and make brief observations as to the condition of each of the schools under my superintendence.

COUNTY OF LAPRAIRIE.

1. *Laprairie.*—In the village there is a convent, under the management of the Sisters of the Congregation, which is too well known to be in need of my praise; it is usually attended by 130 pupils. The academy for boys, ably directed by Mr. St. Hilaire, a pupil of the Jacques-Cartier Normal School, has 125 pupils. The village also contains an independent superior school for girls, attended by 64 pupils; it is kept by Mde. Blanchard, an experienced teacher who holds a Model School diploma. The elementary schools are well attended, with the exception of those of Nos. 3 and 6, where the attendance has been small and but little progress has been made. The school commissioners of Laprairie show great zeal for the cause of education by furnishing the schools with paper and books. It is well known that a want of these articles is one of the greatest obstacles to the advancement of education. The accounts and minutes of proceedings are kept in a very plain and orderly manner by Mr. Lanctot, Notary.

2. *St. Philippe.*—This parish possesses a model school and five elementary schools. The model school, kept by Mr Boutin, has not made so much progress this year as last, probably on account of want of assiduity on the part of the pupils, for the teacher seems to be active and zealous; the number of pupils entered on the journal is 72. The elementary schools have all produced satisfactory results. The school-houses which have been more or less extensively repaired, are all in tolerably good order. I myself kept the accounts of the commissioners for two years, and placed them, in good order, in the hands of the present Secretary-Treasurer, Mr. Hubert Lefebvre.

3. *St. Jacques le Mineur.*—Like St. Philippe, this parish contains a model school and five elementary schools. Mr. R. Martineau teaches the model school very successfully; it is attended by 135 pupils. The elementary schools, except the one in the lower part of the St. André Range, are well managed. Mr. Moïse Martin, farmer, the Secretary-Treasurer, keeps the accounts regularly.

4. *Caughnawaga.*—The Indian school has been closed in consequence of the great indifference of the persons interested; in the village, however, there is a French independent elementary school, kept by a female teacher and attended by 42 French Canadian pupils.

5. *St. Constant.*—This parish contains a model school, four French elementary sohools, and an English dissentient school. Mr. Joseph Paradis teaches the model school, which is attended by 104 pupils, with zeal and ability. There has been no sensible progress in schools No. 2 and 4, in consequence of the little assiduity exhibited. The results in the other schools, which are better attended, have been more favorable. Mr. Defoy, Notary, keeps the accounts of the school commissioners. The dissentient school, attended by 50 pupils, is kept by a very competent female teacher, who teaches English only.

6. *St. Isidore.*—This Parish contains a very flourishing model school, attended by 89 pupils and kept by Mr. Victor Maucotel, a native of France; also a girls' school, very well kept attended by 74 pupils, and two good elementary schools taught by females; that in the lower part of the St. Regis Range is attended by 90 pupils, and that in the upper part of the same range by 86. The accounts, which are kept by Mr. Langevin, Notary, are in good order.

COUNTY OF CHATEAUGUAY.

7. *St. Joachim de Chateauguay.*—The convent in this parish, under the direction of the Ladies of the Congregation and attended by 110 pupils, may be classed as a very good educational institution. The model school, attended by 74 pupils, is well conducted by Mr. Giroux. The elementary schools, four in number, are well kept with one exception, No. 5, where the progress has not been so great as it should have been. The dissentient school appears to make progress; it is kept by a female teacher. The accounts are kept by Mr. LePailleur, Notary; there has been great negligence in this respect, which has given rise to a suit which is not yet terminated. At present things are doing well; there are few arrears of assessment, and the teachers are regularly paid.

8. *Ste. Philomène.*—This municipality contains a model school for boys, a girls' school in the village, and four elementary schools in the concessions, taught by females. In the model school, which is attended by 70 pupils, there has not been so much progress as formerly. The girls' school is well kept, and is attented by 60 pupils. The school commissioners, from motives of economy, have resolved to unite these two schools under one teacher. I consider this mistaken economy, and do not approve of the decision. The two schools in the Ste. Marguerite concession are sufficient; that in the upper part of the concession is attended by 57 pupils, and the other by 55. The school in the St. Charles concession, which is attended by 51 children, is of medium quality. The school at the water side, attended by 46 pupils, is very well kept.

9. *Ste. Martine* contains a model school for boys, a school for girls, five elementary schools under the control of the commissioners, and a dissentient school. The model school, under the direction of Mr. Guilbault, and attended by 138 pupils, is also well kept. Of the elementary schools, that in No. 5, taught by Mr. Vanier, is the best; that in No. 2 has deteriorated; and the others are passable. The Secre-

tary-Treasurer, Mr. James Wight, is very zealous, and keeps the accounts well. The dissentient school, although little progress has been made in it, seems to be well kept; it is under the management of a female teacher, and is attended by 22 pupils.

10. *St. Urbain.*—This parish, although it contains no model school, is not backward in respect of education, and its elementary schools, which are taught by females, are on a very good footing, except that in section No. 2, which is, however, pretty good. The number of pupils attending the schools is 85 in each of sections Nos. 1, 3, and 62 in section No. 2. Mr. Notary Bisson, the Secretary-Treasurer, performs his duty well. The dissentient school is kept by a female teacher who is not very competent; it is attended by 38 pupils who make little progress.

11. *St. Jean-Chrysostôme, No.* 1.—This municipality contains three English Catholic schools. That in section No. 1 is taught by a very competent young female, and is attended by 64 pupils, 8 of whom are Protestants; 5 are of French, and the others of English origin. In section No. 2 the school is kept by a good teacher, and is attended by 58 pupils, of whom 43 are Catholics and 15 Protestants; 12 are of French and the remainder of English origin. The third school is attended with but little regularity by 47 pupils, of whom 6 are of French origin and the rest English; they are all Catholics. Mr. George Hart performs the duties of Secretary-Treasurer in a satisfactory manner.

12. *St. Jean Chrysostôme, No.* 2.—As in St. Jean Chrysostôme No. 1. only the Catholic schools of this municipality are under my superintendence. Of the 17 school-sections of which it was formerly composed, only 11 now remain; of these, seven have Catholic and four Protestant schools. The other sections have been attached to adjacent municipalities. The model school, which has 140 pupils, all French Canadians, is zealously and ably taught by Mr. Benjamin Singer. In section No. 2 a good school is kept by a male teacher, and is attended by 65 pupils, of whom 35 are Catholics and 30 Protestants; 10 are of French and the remainder of English origin. Section No. 3 is temporarily united with No. 1. In section No. 4 the school is well kept and is attended by 80 French Canadian pupils. Sections 5, 6 and 7 are situated in the new parish of St. Antoine Abbé, which has been detached from St. Jean Chrysostôme. The school in section No. 8, taught by a female, is inferior; it is attended by 42 pupils, two-thirds of whom are Catholics; 18 are of French and 24 of English origin. Section No. 9 is attached to Hemmingford. At the time of my visit the school in section No. 10 had been closed for some months, in consequence of the unexpected departure of the teacher; it was attended by 68 pupils, all of English origin, and about equally divided in respect of religion. The schools in sections 11, 12 and 13 are Protestant, and consequently not under my control. Section No. 14 has a good school, taught by a female, attended by 103 pupils, of whom 23 are Protestants and 80 Catholics; they are about equally divided in respect of origin. Section No. 15 is united with No. 14; No. 16 is also attached to Hemmingford, and No. 17 has a Protestant school. The late Secretary-Treasurer, when he went away from the parish, left the books, and especially the accounts, in some confusion. Mr. Leriche, who has succeeded him, appears to understand his duty well and to perform it faithfully.

13. *St. Antoine Abbé.*—In this new parish there are three good elementary schools in operation. That in the Lemieux range is taught by a female, and is attended by 58 pupils who are nearly all Catholics; they are about equally divided in respect of origin. In section No. 2 the school is kept by a male teacher, and attended by 58 pupils, all of French origin. The third school is taught by a female; it is attended by 71 pupils, nearly all of whom are Catholics; about one-half are of French and one-half of English origin. The difference of origin in this section is giving rise to difficulties. The Irish are desirous that the school should be exclusively English, while the Canadians, who are in a majority, wish, with reason, that both languages should be taught. I rely on the zeal and influence of the Rev. Mr. Labelle, the Curé, to effect an adjustment of these difficulties.

14. *St. Malachie d'Ormstown.*—The Catholic dissentients have only one school in this municipality, and they are too poor and too few in number to maintain it unless assistance is granted to them by the Government. This school, which has been closed during a part of the year, was in operation at the time of my visit and was conducted by a teacher whom I believe to be very competent; it was attended by 52 children, nearly all of whom were of English origin and Catholics. The house is in very bad condition and unprovided with many indispensable articles,

COUNTY OF BEAUHARNOIS.

15. *St. Clément de Beauharnois.*—The academy for boys, which is known in the vicinity as "The Beauharnois College," and which has six professors, Brothers of the Order of St. Joseph, is attended by more than 250 pupils. The convent of the Ladies of the Holy Names of Jesus and Mary, which has nine religious and two lay teachers, is attended by 240 pupils. These two institutions are managed in a way that does honor both to their generous founder and to the skill of those under whose direction they are.

The elementary schools in the concessions, 9 in number and taught by females, are a little less forward than those in some other parishes, in consequence of some of their best pupils being taken away by the academy and the convent. The financial affairs are managed by Mr. A. G. Thériault, and the difficulties which formerly existed have almost entirely disappeared. There are also two dissentient schools in the village of St. Clément; one is a boys' school and has 22 pupils: of the existence of the other, which is a girls' school, I was unaware at the time of my visit; it has probably as many pupils as the first.

16. *St. Timothée.*—The convent of the Ladies of the Holy Names of Jesus and Mary vies with that of Beauharnois in zeal and devotion; but it is not so numerously attended as the latter, as it is situated in the midst of a district which is less populous and less favored in other respects; it, however, contains 138 pupils, whose brilliant success is as satisfactory to those who encourage the institution as it is honorable to those who direct it.

The academy for boys, which occupies a magnificent building, for which we are indebted to the generosity of the Reverend Mr. Archambault, the Curé, has 190 pupils. The school commissioners know how to appreciate the zeal and extraordinary ability of their teacher, Mr. Green, and they prove this by allowing him a salary of $550. The elementary schools, five in number and taught by females, are making progress, except the one in the lower part of the double range. The accounts are kept in a very orderly manner by Mr. Gervais, Notary.

17. *St. Cécile.*—The difficulties which had arisen between the school commissioners and the seignior, Mr. Ellis, or his agents, being almost settled, the commissioners have hastened to re-open the schools which they had been compelled to close. A model school, a girls' school, two other elemantary schools under the control of the commissioners, and two independent schools, one Catholic and the other Protestant dissentient, are now in operation in this little municipality. Mr. Codebecq, a native of France, conducts the model school, which contains 93 pupils, with success. The other schools, all taught by females, are on a good footing, although in general but little advanced. The girls' school has 70 pupils; that at Grande Isle has 35, and that at the Double Range 24. In the independent Catholic school, kept by Mrs. McGuire, English and French is taught to 24 pupils, all Catholics, and about equally divided as to origin. The other independent school, which I visited in company with the dissentient trustees and the minister of the place, is attended by 34 pupils, all Protestants and of English origin. The accounts of the school commissioners are regularly kept by Mr. Massé, Notary.

18. *St. Stanislas de Kostka.*—The two elementary schools in this municipality, although but little advanced, are well kept. That in section No. 1, which has 66 pupils, is kept by a male teacher, and that in section No. 2, attended by 62 pupils, is taught by a female. The duties of Secretary-Treasurer are performed by Mr. Notary Longtin, who seems to be conversant with them.

19. *St. Louis de Gonzague.*—Of all the municipalities in my inspection district, this one contains most school sections and has most schools in operation, and, after St Clément, is the one which sends the greatest number of children to the schools. The model school, kept by Mr. Rivière, a well educated, skilful and zealous teacher, is under the control of the commissioners; it is attended by 96 pupils. There are seven other elementary schools taught by females, which make about equal progress.

The dissentient trustees have also 4 English schools under their control. That in section No 1 is attended by 63 pupils and is kept by a male teacher who has a salary of $240; that in No. 2, attended by 56 pupils, is also kept by a male teacher, who also receives a salary of $210; that in No. 3, attended by 30 pupils, is taught by a female, who has a salary of $200; and that in No. 4, which has only 20 pupils, is also taught by a female, who has a salary of $120.

The commissioners have for their Secretary-Treasurer Mr. Gagnier, who has taken great pains to restore order in the financial affairs which, it would seem, had been badly administered previous to his acceptance of office.

EXTRACTS FROM THE REPORTS OF Mr. INSPECTOR BRUCE

COUNTY OF HUNTINGDON, PART OF THE COUNTIES OF CHATEAUGUAY AND ARGENTEUIL, AND THE PROTESTANT POPULATION OF THE CITY OF MONTREAL.

First Report.

My present report shows far fewer schools in an unsatisfactory state that any of my previous reports. Of all the schools in operation at the time of my visits, only 11 have I had to report unfavorably. Of these, three are in the parish of St. Anicet, two are in the municipality of Dundee, two in Godmanchester, one in Hinchinbrook, one in Franklin, one in St. Chrysostôme, and one in Hemmingford. Of those of which I have to report favorably, 9 were found in an excellent state, 56 in a satisfactory state, and 43 in a fair and improving state.

To bring up our schools to that high standard at which we aim, many are the obstacles which have yet to be removed, and the difficulties to be surmounted. But even a bird's-eye view is sufficient to show that within the last few years not a few of the former have been done away with, and many of the latter greatly lessened. Ignorance of our school law, peculiar and shallow notions about teachers and teaching, officious interference with teachers and school management, miserly dispositions, putting more value on a few dollars than on a good education or on the general improvement of society, we reckon among our greatest hindrances to educational advancement.

There are two other things to which I beg to direct attention, which I consider very hindering to educational progress:

1st. The many inefficient teachers sent abroad by our Boards of Examiners. Their motives for passing individuals of low qualifications, at first especially, showed consideration. Teachers then were few; but that state of things has passed away. The scarcity of teachers is not now the want: the scarcity of good teachers is now the great want.

2nd. Irregular attendance is another hindrance to progress in our schools. This is a general and a crying evil. The most painstaking, the most persevering, and the most skilled and talented teachers cannot successfully contend with it.

The examination of schools is a most important work.

The suggestions I make with reference to this subject I wish to be considered as the results of considerable experience, and some consideration.

1. The inspector should proceed to examine a school with its daily journal before him.

2. To do as much justice as possible to both the teacher and the scholar, he should judge of his progress with special reference to his age, the time he has attended school, the regularity of his attendance, and his capacity. For the first three, he looks in the journals; for the fourth, he must look partly to the teacher.

3. On beginning the examination—let us suppose with the lowest classes—he examines class after class, taking care to examine them on no prepared lessons.

4. In collecting results, it should be with reference to the things referred to under No. 2, noting, as he proceeds, how they read, the teacher's method of teaching and training them, what knowledge they have of what is taught them, their advancement with reference to their state, when they entered school, how his way of teaching and manner tend to excite the children to seek instruction, and observing whether instruction has been bestowed equally upon all.

5. But care must be taken not to keep any class, a juvenile class especially, long under trial. Let it be searching—strictly judicious—while continued.

1. *Elgin.*—The schools of this township are all in operation. Three are conducted with tolerable efficiency, and two are not in a very satisfactory state. The teachers of Nos. 2 and 3 never taught before, and need considerable experience and knowledge of effective teaching to make them successful instructors.

2. *Huntingdon.*—All the schools in this village are in operation. The schools under the commissioners are in a satisfactory state; teaching efficient, showing considerable intelligence and skill. The academy is not so well attended as usual. Respecting the talents and skill of the present Principal in conducting it, there can be no doubt; he is an efficient and a laborious educator. The dissentient school in the village is in a fair state.

I wish commissioners and trustees would discharge their duties as efficiently as the teachers.

3. *Godmanchester.*—Not many schools in this municipality are at present very ably conducted. So frequently do they change their teachers that schools well conducted one year are very often but indifferently conducted the following year. The best conducted schools at present are those of Nos. 2, 5, 6 and 10. Of the dissentient schools, No. 1 is by much the best conducted school, and the scholars are far more advanced. School No. 3, dissentient, is in a low state; and No. 3 is next to defunct.

4. *Dundee.*—I was much pleased to find the commissioners so earnest and willing to second my efforts in improving their schools and raising the teaching to a higher standard. With the exception of Nos. 5 and 7, their schools are at present in fully a better state than usual. The children of No. 6 showed the most advancement, especially in reading, spelling on slates, writing, and, the more advanced scholars, in arithmetic; it is also the school in which grammar and geography are taught to much advantage.

The great hindrance to the advancement of education in this township still continues, viz: the short engagement of teachers and never keeping the same teacher sufficiently long in the same school.

The dissentient school in Dundee, like the majority of dissentient schools under my supervision, is doing little good. It is oftener closed than in operation, and when open it is for a short time, and conducted by teachers so low in qualification that the children benefit little by their instructions.

5. *St. Anicet.*—The state of the schools in this parish, under the commissioners, differs little, if any, from what it was when I last reported. The most thriving is No. 12; its children are considerably in advance, in all the branches they study, of those of others of their schools.

The commissioners are not very fortunate in getting the right kind of teachers; it is true they engage teachers only having diplomas, but so often are trustees, commissioners and myself disappointed and altogether deceived by such guarantees of qualification, that we find it best and more to the advantage of schools to choose teachers with reference to our own knowledge of their capabilities and skill in teaching. Our Examining Boards are seldom successful in ascertaining the true qualifications, aptness to teach, and tact in conducting schools, of those who come before them to undergo an examination.

The dissentient schools, with the exception of No. 2, have considerably improved. Their trustees appear to be earnest in discharging their duties and doing their utmost to engage efficient teachers; but they have not a few difficulties with which to contend, and which are not easily surmounted.

6. *Hinchinbrook.*—The schools of Hinchinbrook have generally teachers of fair qualifications and zealous in the discharge of their duty; and it is worthy of notice that when some near townships had scarcely one teacher deserving favorable notice, Hinchinbrook never wanted some able, devoted teachers. Nor are its commissioners given so much to changing teachers as other municipalities under my jurisdiction; hence the more steady advancement in education of its regular school-going youth.

7. *Franklin.*—The schools of this municipality are all in their ordinary state of efficiency. Indeed, four, viz., No. 1, 3, 4 and 5, are very satisfactorily conducted. Of no school, therefore, have I to report unfavorably.

8. *St. Malachie.*—I have to report of no school unfavorably. The only school in the parish doing little good, is the dissentient school in the village of Durham. This school is kept very irregularly in operation, and very seldom has it an efficient teacher. The schools whose pupils showed most advancement, are Nos. 1, 2, 4, 5 and 7: Nos. 3, 6, 10, 11 and 14 are making very fair advancement. The children of this parish are favoured with not a little of intelligent teaching. Much is done in nearly all their schools to create in the mind of the scholar a craving for knowledge—a desire to understand everything taught,—thus urging him on to higher attainment.

9. *St. Jean Chrysostôme.*—The schools in this parish under my immediate supervision are all in a satisfactory state. Two of the trustees of the dissentient school were present at its examination.

(To be continued.)

Notices of Books and Recent Publications.

Langevin.—*L'Histoire du Canada en tableaux, par Jean Langevin, Prêtre, 2e édition.*—Coté & Co., Quebec. 8 p.

This very useful pamphlet contains chronological and other tables arranged under the following heads: 1st. Political events; 2nd. Religious events; 3rd. Lists of Vice-Roys, Governors, &c.; 4th. Lists of R. C. Archbishops and Bishops; 5th. Discoveries, battles, treaties, &c., both periods of French and English rule in this country being

included. We have no doubt the book will be found valuable to teachers and pupils.

PATON.—O Wheel! or Thanksgiving Thoughts; By the Rev. A. Paton.—Montreal, Dawson, 18 p.

JENKINS.—Canada's Thanksgivings for National Blessings in the year of Our Lord 1865; By the Rev. John Jenkins, D.D.

These two pamphlets are published at the request of the respective congregations before whom the thanksgiving sermons were preached. We extract the following remarks from the discourse of the Rev. Mr. Jenkins, who placed the Educational statistics of the Province among the objects for which thanks should be offered.

"*The perpetuity of our Educational Institutions.*—Considering the newness of Canada, the work of education has made great progress amongst us; and we cannot be sufficiently thankful that the government has devoted so much of its thought and care to a work upon the successful prosecution of which depends the present and future well-being of the country. The statistics as to both numbers and advancement of the common-schools of Western Canada, compare favourably with those of older countries,—of England, of Prussia, and even of New England. Amongst ourselves in the Eastern part of the Province, owing to a difference of religious belief, it is somewhat difficult to establish a uniform and thorough scheme of common-school education. Yet, the attempts made in this direction have not been wholly unsuccessful; and imperfect as in many respects the working of the scheme must be, we are not without hope that gradually the majority of the people in Eastern Canada will be roused to consider the immense advantage which would accrue to them were their children submitted to a liberal and thorough common-school training. In the plan which shall be devised for uniting British North America under one government, it may be hoped that those who are in the minority, holding as they do their Protestant principles dear, viewing these principles as a holy birthright and a sacred trust, as indeed the basis of much of the liberty and freedom and elevation and good order and prosperity that Great Britain has enjoyed since the Reformation, will be protected in their preferences, and permitted to retain their children under those religious influences which have been so greatly blessed to themselves. Not for a moment would we interfere with the convictions and preferences of our fellow-subjects of another faith. Let them enjoy that liberty in religion which was guaranteed at the conquest. Faithless would Great Britain be, faithless should we also be, were any attempt made to restrain their ecclesiastical freedom. What we ask is that our rights shall not be overlooked, that our children shall not be tampered with. I have no fear for the CITIES, I speak rather of those country parishes in which our Roman Catholic friends are in an overwhelming majority. This point it will be our paramount duty to guard.

"Those higher institutions of learning which have been established amongst us chiefly by private munificence, the prosperity which has attended them, and the character which they have acquired—a character which is acknowledged by the most venerable institutions in the mother country—demand also a grateful reference. These are institutions on which the better classes amongst us must for the most part depend for the education of their sons, and from which the learned professions must be replenished with members. That we have universities and colleges in such numbers and, in general, so efficient, augurs well for the future of the country; because upon the intelligence, earnestness and efficiency of the pulpit, the senate, the bar, the medical profession, and the mercantile profession proper, every nation is largely dependent for its progress in liberty, in morality, in civilization, in all that constitutes social well-being."

JACQUES-CARTIER.—*Voyage de Jacques-Cartier au Canada en 1534. Nouvelle édition publiée d'après l'édition de 1598, et d'après Ramusio, par M. H. Michelant, avec deux cartes. Documents inédits sur Jacques-Cartier et le Canada, communiqués par M. Alfred Ramé.* Small 8vo. 124 pp. Tross. Paris.—12 francs.

We alluded some time ago to a *fac-simile* reprint of the Second Voyage of Jacques Cartier to the St. Lawrence, from the original edition (1544); a new edition of the *First Voyage* is now before us. Many additional papers are given as hitherto unpublished, but most of these are contained in the fifth volume of the *Transactions* of the Quebec Literary and Historical Society, in which may also be found other particulars that appear to have been entirely unknown to the Paris publishers and which the Society obtained from Mr. Desmazières de Séchelles. The three works compiled by the Literary and Historical Society, *i. e.* the volume published in 1843, the *Transactions* and the *Album*, form the most complete history of the discovery of the St. Lawrence that we know of.

PERROT.—*Mémoires sur les Mœurs, Coutumes et Religion des Sauvages de l'Amérique septentrionale. Par Nicolas Perrot. Publié pour la première fois par le R. P. Tailhan, S. J. Leipzig and Paris.* viii-341-xxxix pp. Franck—*Bibliotheca Americana* Collection.

The author, Nicolas Perrot, resided, we are told, almost habitually in the remotest part of New France, among the Indians. He commenced his career as trapper, acting occasionally as interpreter, but he was afterwards entrusted with a command and served under the successive governments of Messrs. de la Barre, Denonville and Frontenac. The *Mémoire* was written after Perrot's retirement from active life and was intended confidentially to enlighten the Intendant of Canada on the true character both of the friendly and hostile tribes of Indians and on the manner in which they should be treated with. The only copy extant was that from which the present edition has been printed. It was published in the last century, and is probably the same that Charlevoix made use of, and which that author had obtained from Mr. Bégon, Intendant of Canada in 1721.

FAILLON.—*Histoire de la Colonie française en Canada.* 2nd volume, xx-iv-568 pp. Poupart-Davyl. Paris, 1865.

The second volume brings M. Faillon's narrative down to 1662, covering one of the most interesting epochs in the history of the colony. We have, among other incidents, a very circumstantial account of Mgr. de Laval's differences with Mr. de Queylus—a portion of the work that, written as it is from the author's own point of view, may lead to controversy. The appended muster-roll of the celebrated levy of 1653 includes many names that have altogether disappeared, while others, such as Baudry, Baudoin, Bellanger, Benoist, Boivin, Bondy, Bonneau, Bouchard, Brossard, Cadieu, Chartier, Desautels, Ducharme, Duval, Gendron, Gregoire, Hardy, Hertubise, Jetté, Langevin, Lecomte, Lefebvre, Leroux, Martin, Olivier, Papin, Picart, Tavernier, Valiquet, are widely spread throughout Canada at the present day. Among these names there is one which possesses a sad interest at this moment, we mean that of Barreau. The majority of these settlers came from the environs of LaFlèche, in the province of Maine, on the confines of Anjou. The researches of the *Abbé* Ferland and those of Mr. Garneau have shown that many colonists in the environs of Quebec came from Perche, also in Maine. Thus it would appear that the old Provinces of Maine, Anjou, Poitou, Saintonge, Touraine, and even Orleans and Ile de France contributed largely to the first emigrations to the colony,—a fact from which it would appear that the French Canadians are not so generally descended from Normans and Bretons as had been supposed.

LONGFELLOW.—*Evangeline, conte d'Acadie. Par H. W. Longfellow; traduit par Ch. Brunel.* 12mo, 125 pp. Paris, Meyrueis.

Another translation of Evangeline, this time, however, in prose. It is a coincidence worthy of a passing remark that two *littérateurs*, one a Frenchman, the other a more daring Canadian, should have been engaged in rendering Longfellow's Acadian Tale at the same time. Mr. Brunel had naturally a great advantage over his competitor, Mr. Lemay, who translated in verse, and he has not been obliged to deviate so much from the original. The translation is a very good one, though almost literal.

LE FEUILLETON.—This is a new weekly paper devoted to unobjectionable works of fiction and to light literature selected from European journals. Subscriptions are received by Mr. Chapeleau, Bookseller, Montreal. Price, $1 per annum.

DAGENAIS AND LEMIRE.—*Gazette Médicale, revue mensuelle médico-chirurgicale.*—4to, double columns, 16 pp. Montreal, August and September, 1865.

We have seen the two first numbers of this scientific periodical, which is under the direction of Drs. Dagenais and Lemire. The subscription is only $2 per annum. It is, we believe, the third attempt to establish a medical review in the French language in this country, where English periodicals of the same kind also find it difficult to live. We wish the Editors every success.

TOUSSAINT.—*Traité d'Arithmétique. Par F. X. Toussaint.*—12mo, 238 pp. Desbarats, Quebec.

Mr. Toussaint is Professor of Mathematics at the Laval Normal School, and is one of the oldest teachers in the country. His treatise on Arithmetic embraces the more advanced problems, touches upon algebra, and is followed by a table of logarithms. The third part treats of proportion and arithmetical progression, geometry, annuities, tables of weights and measures, forms of accounts, receipts, promissory notes, bills of exchange, &c. With reference to this and the following work, we would remind our readers that we are not at liberty, consistently with a proper observance of the conventionalities,

to recommend or condemn any work that we know will be submitted for the approval of the Council of Public Instruction.

LAFRANCE.—*Abrégé de Grammaire Française. Par C. J. L. Lafrance, Directeur de l'Académie Saint Jean-Baptiste.*—12mo, 122 pp. Darveau, Quebec.

SCHMOUTH.—*Direction pour la Culture du Tabac. Par J. E. Schmouth, Professeur de l'Ecole d'Agriculture de Ste. Anne.*—32mo, 24 pp. Côté, Quebec.

The cultivation of tobacco has assumed considerable development of late years in this country and in several of the adjoining States of the American Union. The soil and climate of Lower Canada are very favorable to the growth of this weed; the area of country available invites attention to its cultivation, and there are unfortunately too many eager consumers on the spot. The author, Mr. Schmouth, is a pupil of the Jacques Cartier Normal School, and it gives us much pleasure to notice his little work, which will be very useful in its way.

MONTHLY SUMMARY.

EDUCATIONAL INTELLIGENCE.

— It is understood (says the Dublin correspondent of the "*Times*") that under the modified scheme of constitution and management for the Irish Queen's Colleges, the Catholic University will become a fourth Queen's College, retaining, however, its exclusive character, and changing its name to the University College, Dublin. A representation in the reconstructed senate of the Queen's University, in the proportion which the number of its students shall bear to those of the other colleges, is also sought by its conductors and by the Roman Catholic bishops; and there is a further rumour of an intention to alter the present name of Queen's University to that of National University, to describe its altered character under these arraogements. The sum per annum which the University College, Dublin, as it is to be called, will obtain, as its share of the Irish educational endowment, is believed to be 12,000*l*.—*Educational Times.*

— Mr. James Beattie, Auchterless, who has daily taught, without fee or reward, a school at Gordonston for sixty years, completed his 82nd year on Friday last, and on that evening he invited his pupils, boys and girls, to the schoolroom, where, after being first examined in the presence of a number of spectators, the whole were treated to tea, and afterwards to fruit and a little wine, given by the hand of their aged instructor. The meeting was a very pleasant and interesting one; and we venture to think that nowhere in the kingdom will there be found a school the teacher of which has, for sixty years, taught without fees. Mr. Beattie's work is a labour of love, and his pupils make great progress.—*Banffshire Journal.*

— At the opening of the session, the Rector of the Laval University, in presence of a large assembly, conferred the following honors and degrees, viz: B.A., and Prince of Wales' Medal, Mr. Louis Langis (*Arts*); B.A, Messrs. Théodore Jobin (*Literatur*); Pierre Boily, Paul Laroque, Antoine Ouellet (*Sciences*); Joseph E. Cauchon, J. Geo. Colston, H. Lecourt and Léon Vidal (*Arts*). M.D., Messrs. Napoléon Lavoie, Romuald Gariépy, Alfred Lachaine, Laurent Catellier, C. Antoine Delage, Napoléon Dion.

To render the degree of B.A. more easily obtainable, the Faculty has been divided into three sections, *i. e.*, Arts, Literature, and Science, any of which may confer a degree. This change will be very favorable to students possessing an aptitude for any particular branch included in any one of these three divisions. The section in Arts will preserve its original character, and its degree (*Bachelier-ès-arts*) will be the highest prize to which the classical scholar at this University can aspire. The degree of *Bachelier-ès-lettres* will be accorded for literary merit, while that of *Bachelier-ès-sciences* will reward the successful scientific student.

Some alterations have also been made in the rules by which the Faculties of Law and Medicine are guided in granting diplomas. Thus, with the present arrangements, the students will, in the Faculty of Law, receive, after three years' attendance, a degree securing to them valuable advantages under the law; and in the Faculty of Medicine, the degree of Licentiate in Medicine will be attainable after four years' attendance.

NECROLOGICAL INTELLIGENCE.

— William Edmonstone Aytoun, Professor of Rhetoric and Belles-Lettres in the University of Edinburgh, and a very eminent Scottish author, died on the 4th of August. He was born at Edinburgh in 1813, was educated at the University of which he afterwards became Professor, and in 1831 gained a prize for the first poem, "Judith." He was called to the Scottish bar in 1840, and in 1845 was appointed by the Crown to the chair of Rhetoric and Belles-Lettres in Edinburgh University. In 1852 he was appointed Sheriff of Orkney and Shetland by the Derby Government, as a mark of their consideration for his zealous support to the Conservative cause. It was his literary career which gave him celebrity. He was a contributor for thirty years to *Blackwood* and other magazines, under the *nom de plume*, partly, of Augustus Dunshunner. His ballads, published in connection with Theodore Martin's as the "Bon Gaultier" ballads, gave him a wide fame, aside from his magazine reputation. He published "The Lays of Scottish Cavaliers," first printed in a collected form in 1858, and now in their 17th edition; "Firmilian: A Spasmodic Tragedy," 1854, an amusing and effective burlesque of the sensational drama; "Bothwell: A Poem," giving an episode in the history of Mary Queen of Scots, published in 1856; an edition of "The Ballads of Scotland," 1857; lectures on "Poetry and Dramatic Literature," delivered in London in 1853; translations of "Poems and Ballads of Goethe," a joint production with Mr. Theodore Martin; "Norman Sinclair," a novel, first published from *Blackwood's* pages in 1861. He was also the author of some amusing papers, of which the dry and sly humour, perhaps, was best appreciated by his own countrymen, entitled "The Glenmutchkin Railway," a burlesque of the railway mania; "How I stood for the Dreepdaily Burghs," a farcical sketch of electioneering, &c. Professor Aytoun was a D.C.L. of Oxford, and held other academical honours.—*U. C. Journal of Education.*

— The death of General Lamoricière, whose devotion to the Holy See has been attested by the willing sacrifice of all that a soldier holds most dear —his military reputation—must have been very sensibly felt by the Holy Father.

Born at Nantes on the 5th February 1806, Christophe-Louis-Léon-Juchault de Lamoricière entered the well-known *Ecole Polytechnique* at an early age, and having completed his military studies in 1826, was appointed to the Engineers. He accompanied the expedition to Algiers in 1830, and upon the formation of the zouaves, was included in that organization. Here his genius and daring attracted attention, and a series of successes awaited him. The name of Lamoricière, and that of general Bugeaud, soon became the terror of the Arabs. In not less than eighteen consecutive campaigns did he distinguish himself, ending his triumphs with the total discomfiture of the enemy and the capture of their celebrated leader, Abd-el-Kader.

The revolution of 1848 found him engaged in parliamentary duties; he had formed part of the Opposition and had also been made Minister of War during the last political combinations attempted by the falling monarchy. On the 24th February 1848, he appeared in the uniform of the National Guard, proclaiming the abdication of the King and the regency of the Duchess of Orleans, but he was attacked and wounded, his horse was killed under him, and he would in all probability have lost his life had not some workmen rescued him from the hands of their infuriated comrades. Under the Provisional Government he declined the portfolio of Minister of War, nor would he accept of any military office. Elected a representative of the people he acted with the moderate section of the democratic party. During the insurrection of June he placed his services at the disposal of General Cavaignac, fought against the insurgents, and accepted the office of Minister of War, which he held from the 28th June until the 20th December. In July 1849, he was charged with an extraordinary mission to Russia, but arriving after the fall of the Hungarian nationality he asked to be recalled. On his return to Paris he ranged himself against Louis Napoleon's party in the Assembly, was arrrested on the 2nd December, and, after a short imprisonment in the fortress of Ham, conducted to the frontier by the police, where he was set at liberty. He resided for some time in Germany and in England, and in 1857, was accorded permission to reënter France on the occasion of the sudden death of one of his children. In April 1860, he, with the permission of the French Government, accepted the command of the Pontifical army, and, with a handful of men, attacked Victor Emmanuel's invading columns under generals Fanti and Cialdini; but being greatly outnumbered, he was defeated at Castelfidardo, and locking himself up in Ancona, was soon obliged to surrender.

General Lamoricière was interred at Nantes, his native town. A very touching oration was pronounced over his remains by general Trochu, who feelingly alluded to the noble qualities which had rendered the career of the departed warrior illustrious.

— M. Théodore Barreau, the author of many valuable works on education, died recently in Paris, at the age of 71. At the time of his death he was still engaged in literary labors. He was born at Toulouse, France, on the 18th October 1794, and filled the Chair of Rhetoric in the college of Niort during a space of ten years. The following are among his most popular works: *De l'Education morale pour la Jeunesse; Direction morale pour les Instituteurs; Conseils aux Ouvriers; Du Rôle de la Famille dans l'Education; Livre de Morale pratique; Histoire de la Révolution française;* and *Lecture pour les Elèves des Ecoles normales.* This able writer took a lively interest in the progress of education in this country, and the Department is indebted to him for several volumes, presented to its library.

— The death of Lord Palmerston, though an event not altogether unlooked for, created a profound sensation on this continent wherever the news was received.

For more than half a century this great leader had so completely identified himself with the controlling power in England that, as a contemporary has well observed, to write his life would be to write the history of his country since his long and glorious career began.

Born at Broadlands in October 1784, he commenced his studies at Harrow and graduated at Cambridge in 1806. Having been returned to the House of Commons soon after for the borough of Bletchingley he was, in 1807, made a junior Lord of the Admiralty, and had sat in Parliament either in or out of office ever since. For ten years he discharged the responsible duties of Secretary of War under the Percival, Liverpool, Canning, Goderich, and Wellington administrations. It was as a Tory that he had first accepted office, and he continued to act with that party until 1828, when having espoused the cause of Mr. Huskison in that gentleman's quarrel with the Duke of Wellington, he passed into the ranks of the Opposition and became a decided Whig. Two years later, on the accession to power of the party with which he had become identified, he was made Secretary of Foreign Affairs in Earl Grey's cabinet—a position he occupied afterwards under several administrations. Among the many diplomatic successes which his vigorous policy achieved about this time, were the recognition of the independence of Belgium, the alliance with France for the protection of the constitutional governments of Spain and Portugal against the Holy alliance, and last but not least, the masterly political combinations which for the time preserved the integrity of the tottering Empire of the Turks. While he recognized the Emperor of Austria as the ruler of Hungary, Lord Palmerston admitted the right of the people to be governed by their old constitution, and it was also through his influence that Kossuth was liberated when Austria sought the extradition of that patriot from the Sultan. The revolutionary crisis of 1848 called the resources of his active mind into play as it required extreme tact and ability to escape being swept into the vortex of Continental anarchy and war without a sacrifice of principle. This he achieved, upholding the doctrine of self-government and constitutional representation, and, on the perpetration of the *coup d'Etat* which placed Napoleon III. on the French throne, he readily gave an official recognition to the new state of things—an act which led to his immediate retirement. He was accused of having sent off at this time some of his more important despatches unread by the Sovereign, a charge which, from the published accounts, seems to have had a coloring of truth. On the formation of the coalition, after the fall of the Derby cabinet, he accepted the office of Home Secretary in the Aberdeen administration, a position he occupied until its fall in 1855, when he became Prime Minister. Three years later, his cabinet having become unpopular, chiefly on account of an attempt to enact a law for the punishment of conspiracy for murder in a foreign country intended to reach such cases as that of Orsini's, he had to give way to Lord Derby. But his retirement was only temporary, he soon resumed his place and continued at the head of public affairs until his death.

Viscount Palmerston was descended from a younger branch of the Temples of Stowe whose founder settled in Ireland in 1609. The first Lord Palmerston was created Peer of Ireland in 1722.

SCIENTIFIC INTELLIGENCE.

—We have been shewn by Messrs J. & W Hilton, of this city, a sample of looking-glass plates silvered by them. The backs are coated with a hard red enamel, by a process of their own. This enamel hardens, and protects the silverings so that the plates can be handled and subjected to pretty rough usage without danger of damage. Hitherto the article (commonly known by the name of red back silvering glass plates) has been only made in Germany, and very large quantities have been brought from thence into Canada and the United States. Messrs. Hilton are now prepared to furnish as good an article as the imported one, and at a less price. A better proof of their facilities for furnishing these goods cannot be found than in the fact that they are now supplying orders for them from the United States. These plates have been on exhibition during last week at the Crystal Palace, and have attracted considerable attention. We are glad to notice this new branch of Canadian industry, and the trade should encourage it by giving it the preference in their orders.—*Trade Review.*

— Artificial refrigeration is evidently destined to receive most important industrial applications. Already, in the paraffine-oil manufacture, and in the ingenious process by which M. Balard and M. Merie obtain chloride of potassium from sea-water, it renders most valuable service, and now M. Alvaro Reynoso, of Havana, is applying it to the concentration of sirups. In face of the well-known fact that water in freezing becomes completely separated from whatever it may have previously held in solution, and of the successful working of the process by which Carré and others produce any desired degree of cold, by mechanical means, at a scarcely appreciable cost, one wonders that no one should have thought before of applying artificial cold to the extraction of sugar from sirups, especially when it is remembered how injurious the action of heat is apt to be. However, M. Reynoso has conceived the idea at last, and is devoting himself energetically to its realization. He is in England just now, testing the respective merits of the various cold-producing appliances in use here. He has found that a sirup marking only 6 deg. of Beaumé's saccharometer becomes converted by congelation into ice, to a sirup of 30 deg. Should it be found that the cold does not injure the sirup, we may look to see great changes in the processes of the sugar manufacture.— *Mechanics' Magazine.*

—Condensed ale is among the latest discoveries. It is the invention of a citizen of Rochester, N. Y., and he claims that by this method the ordinary extract of malt and hops is reduced seven-eighths in quantity, and to the consistency of sugar-house sirups, without throwing off any of the volatile matter, or aroma which brewers seek to retain if possible, not always with success. The heat applied in cooking the extract is steam, and burning of the liquor is entirely avoided, so that, by the peculiar method of brewerage and condensation, the ale is allowed to retain all the finer qualities that impart to it the rare merit that " cheers but not inebriates." The condensed product is put up in ale-casks, and may be shipped to any part of the world unspoiled by heat or climate. This is the greatest advantage which is claimed for it.—*American Artizan.*

— It has been estimated that the ocean contains 160,000 cubic miles of magnesium — a quantity which would cover the entire surface of the globe, both sea and land, to a thickness of more than eight feet. In obtaining salt from sea water, the residuum is largely magnesium. It constitutes 13 per cent. of magnesium limestone, a rock found in all parts of the world in enormous quantities. Three years ago all the chemists who had obtained it probably did not possess an ounce among them. One year ago its price was 112 guineas (about $600 in gold) per pound! Now, owing to improvements recently introduced, magnesium wire is sold at *threepence per foot.* It has been suggested that when it shall be cheap enough, vessels of war should be built of it, for whilst but little heavier than " heart of oak," it is as strong and tenacious as steel.—*American Gas-light Journal.*

— We learn from the *Scientific Review* (published by Messrs. Cassell & Co.) that some curious experiments have recently been made by M. Emile Duchemin on a new and, it is probable, very important use of electricity. He attaches to a small buoy or float a piece of carbon and a plate of zinc, and having, by means of two thin lines connected with its poles, attached this battery to an electric bell apparatus placed on the shore, he throws it into the sea. Not only is the bell, by this means, kept ringing continuously for an entire month—and longer, if desired—but sparks may be taken between the extremities of the wire. This suggested the placing of a similar battery, communicating also with an electric bell, at a certain height against the wall of a harbour. The battery will begin to ring the bell the moment the tide will rise high enough to immerse its elements; and thus it will be announced to ships ready to sail that the water is high enough for the purpose. It is evident that the power of the apparatus may be increased to any extent by increasing the size and number of the battery elements; and the current may be used to sound a large bell, or, by means of Geissler tubes, to produce an electric light so as to give a signal perceptible at a great distance. It is suggested, even, that an electric buoy of this kind would be highly convenient for telegraphic purposes.—*Exchange paper.*

LITERARY INTELLIGENCE.

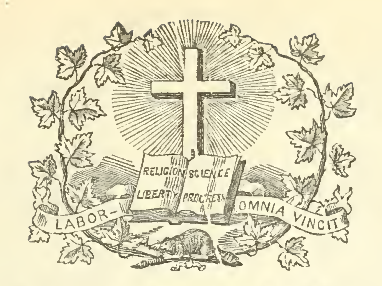
— The several literary clubs formed in connection with the Laval University have recommenced their annual meetings. At the first of these, held by the students in the Petit-Séminaire, under the auspices of Mgr. de Tloa, an essay by Mr. Isidore Belleau, some Latin verses by Mr. Clovis Laflamme, and a paper entitled *Almanzor*, were very much admired. At the meeting of the Medical association, Dr. Larue experimented with the *Spectroscope*, an instrument by means of which so many novel and important discoveries have been made in chemistry and astronomy.

STATISTICAL INTELLIGENCE.

— Philadelphia, the City of Brotherly Love, contains 536 Lawyers and 600 regular Physicians, including 95 Homœpatic, 5 Eclectic, and 1 Hydropatic. Besides these, there is a host of *Doctors*, whose pills and plasters, judging from advertisements, will cure all imaginary ills, from a guilty conscience to the wound occasioned by a mosquitoe's bite. The Medical Schools, 8 in number, are said not to be surpassed in excellence by any in Europe. There are also 244 druggists. The honest gentlemen first named are proverbially sagacious. This is owing chiefly to the fact that emptiness of stomach, if not excessive, promotes vigor of intellect.

The religious houses of worship are classed and numbered as follows:— Baptist, 34; Presbyterian, 76; Methodist, 60; Protestant Episcopal, 63; Roman Catholic, 34; Lutheran, 14; German Reformed, 8; Dutch Reformed, 4; Jewish Synagogues, 7; Evangelical, 5; German Baptist, 2; Congregational, 3; Friends' Meeting Houses, 14; Bible Christian, 1; New Jerusalem, 5; Christian, 1; Disciples of Christ, 1; Mariners, 4; Moravian, 1; Mennonist, 1; Unitarian, 2; Universalist, 2; Spiritualist, 1; Independent, 1; Colored Baptist, 4; Colored Methodist, 10; Colored Presbyterian, 3, Colored Episcopalian, 1.—*Advertiser.*

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LITERATURE.

POETRY.

A BEAM FROM THE STAR OF BETHLEHEM.

BY WM. J. ROSE.

Christmas-eve! the snow is whirling
Thick and fast along the street;
And the sky is dark and gloomy,
Wild the wind and sharp the sleet.
Hark! there, faintly down the pathway,
Comes the tread of baby feet.

And behold, through all the tempest,
Glides a tiny, childlike form;
Weary, wandering, without shelter,
Lost in cold, and night, and storm.
"Whence art thou, poor little stranger,
Through the night and through the storm?

Far outside, the wide plain stretches,
And beyond are hills of snow;
High above, the black sky low'ring,
And the river frowns below;
Whither, whither, in the midnight,
Little lone one wouldst thou go?"

But she hears not, and the snowdrift
Drowns the voice that bids her stay,
And afar along the pathway
Speed those little feet away,
Hurrying whither? Blessed Saviour,
Speed those little feet away!

Feet and hands are cracked and bleeding,
Feet and hands and head are bare,
And the frozen sleet, like jewels,
Clusters in her golden hair;
Tattered garments flutter 'round her,
Battling with the bitter air.

Ah! how shrinks the cow'ring infant,
As the fierce gust chills her through!
Feebly dies her voice of wailing;
For her lips are stiff and blue,
And the tears cling to her eyelids,
Frozen there in icy dew.

Onward, through the gathering darkness
Still she totters in her flight:
Weary, lonely, like a Pleiad
Wandering in the outer night,
Is there no one, is there no one,
Keeping for her warmth and light?

Ha! there gleams athwart the corner
Ruddy glow from happy homes,
And sweet, merry, childish laughter,
Ringing on the bleak wind comes;
For to-night they sport all hopeful,
With the Christmas elves and gnomes.

Happy children! Happy parents!
Bless the roof that shields you here!
Tender father! Gentle mother!
Loving sister! Brother dear!
Not a frown to mar your pleasure,
Every joy and comfort near!

Christmas-eve! the firelight dances
On the pictured parlor-wall,
And apart in cozy chambers,
Gifts are ranged for one and all;
While, below, the blazing kitchen
Sends its cheer through court and hall.

And there, gleaming past the curtain,
See the glittering Christmas-tree,
Hung with golden fruits and trinkets
For the fun that is to be!
O, the candies! O, the treasures!
On that glorious Christmas-tree!

Then, the table spread for feasting,
Pies, and cakes, and comfits piled—
Rosy apples, nuts and raisins,
Grapes whereon the Tropic smiled,
Heaped together—what an Eden
For that homeless, starving child!

Now look on her where she crouches,
Close beside the friendly door,
While she counts the dancing footsteps
As they clatter o'er the floor;
They are singing Christmas-carols,
Singing till their hearts brim o'er!

And she watches through the window,
Little faces like her own,
Beaming with celestial pleasure—
Glossy ringlets backward thrown;
As the father clasps his darlings,
With sweet words she too has known.

Flowery wreaths that deck the mantel
Frame this picture, as she peers,
Holly twined with buds and roses,
Types of happy by-gone years—
For her, too, they wove gay garlands,
In the happy by-gone years.

O, dear father! O, sweet mother!
Where are you who loved me so?
And her little heart outbursting,
Wails aloud its wordless woe;
For alas! they sleep together,
This wild night, beneath the snow.

Tap! upon the heavy casement,
Tap! her hands would make a sign,
"Take me in, kind Christian people!
All these joys, they once were mine!
Here I die of cold and hunger—"
Heeds her but the Ear Divine!

Now the curtain drawn more closely,
And the splendor fading too,
Drowsy bells in hidden steeples
Toll the heavy midnight through;
All is hushed save distant revel,
And the Storm-King's noisy crew!

Now, the bride dreams of her bridegroom,
And the bridegroom, too, is blest;
Now, the mother hugs her bantling
Where it nestles on her breast;
Age and childhood both are happy
In that heavenly Christmas rest.

But no home receives the lone one,
And no mother's fond address
Smooths her pillow in the snow drift,
And no father's hand may bless
That lost fledgling on the doorstep,
Yielding there to Death's caress!

Lo! behold a sudden glory!
List! soft music in the air!
And she rises radiant, lovely,
Clasps her hands and kneels in prayer.
See! an infant form resplendent
Standing right before her there!

On its head a crown of starlight,
Shedding lustre o'er its face!
Heavenly mildness every feature;
All its bearing sweetest grace;
White robes, pure and bright as silver,
Lighting up that gloomy place!

From its brow the tresses parted,
Float aside in sunny sheen,
And its eyes—the deepest, clearest
That our mortal sight hath seen,
Full of tenderest lovelight, beaming
Summer o'er the wintry scene.

Hark! it speaks! its arms extended
Beckon to that lonely one:
"Come to me, poor little stranger,
For thy pilgrimage is done!"
Tones of heaven! can she linger
When the threshold thus is won?

"My Father's house has many mansions,
Far more beautiful than these;
Pastures green by quiet waters,
Flowers of glory, living trees.
No more winter, only summer,
Where His children rest at ease.

"There, on golden harps, the seraphs
Sound eternal anthems high,
And the songs of angel-myriads
Echo all along the sky;
Blessed hosts are there forever,
Souls redeemed that cannot die!

There comes neither care nor sorrow
In that glad, unending day;
But the hand of love undying,
Wipes the tear of grief away.
Though the dark world here reject thee,
There, poor wand'rer, shalt thou stay.

"I am He who, in a manger,
Lay a helpless little child;
Swaddled there in rags and tatters,
While the heathen lands reviled;
Yet the after-ages hailed me,
Lamb of God, the Undefiled!

"I, too, wandered poor and lowly,
Not a roof to shield my head;
Homeless, hungry, lost and weary,
Often forced to beg my bread;
While around, unseen, the angels
Hovered ever near my head.

"Mine the words so oft repeated,
'Little children come to me,'
Mine the prayer for stricken mortals,
Mine the Passion on the tree!
By my blood I made the purchase—
There, the home prepared for thee!"

He points, and now her gaze, in brightning,
Sees the Cross shine forth afar,
And above it, in the heavens,
Bethlehem's hallowed morning star!
While, beneath, two dearest faces
Woo her where the cherubs are.

Hallelujah! strains celestial,
Such the shepherds heard of old,
When the choirs on high, exulting,
Joyous tidings there foretold,
And the scroll of our salvation
O'er the earth for aye unroll'd.

Thus they found her in the daydawn
Kneeling with uplifted eyes,
And her hands outstretched and open,
As with glad and sweet surprise.
While the roseate glow was rising
In the blushing Orient skies.

And the sleet had bound her ringlets,
With a coronal that shone
Like to diamonds, in the sunlight
As its beams aslant were thrown,
And the drift enwrapt her shoulders
With white wings—the angel's own!

Thus, the rays that wrought her shadow
Made a holy, strange device,
Flinging it athwart the doorway,
Like a cross upon the ice!
And a crown of thorny snowflakes
Topped the cross upon the ice!

Cheery Christmas-bells were chiming,
And the merry crowd swept past,
There it lay like God's own blessing,
On that happy doorsill cast,
Where the little barefoot pilgrim
Found her Heaven and Home at last!

SCIENCE.

A Geographical Sketch of Canada. (1)

The great basin of the St. Lawrence, in which the Province of Canada is situated, has an area of about 530,000 square miles. Of this, including the gulf of St. Lawrence, the river, and the great lakes, to Lake Superior inclusive, about 130,000 square miles are covered with water, leaving for the dry land of this basin an area of 400,000 square miles, of which about 70,000 belong to the United States. The remaining 330,000 square miles constitute the Province of Canada. With the exception of about 50,000 square miles belonging to Lower Canada, and extending from the line of New York to Gaspé, the whole of this territory lies on the north side of the St. Lawrence and the great lakes.

On either side of the valley of the lower St. Lawrence is a range of mountainous country. The two ranges keep close to the shores for a considerable distance up the river; but about 100 miles below Quebec, where the river is fifteen miles wide, the southern range begins to leave the margin, and opposite to Quebec is thirty miles distant. From this point it runs in a more southern direction than the river-valley, and opposite to Montreal is met with about fifty miles to the south-east, where it enters Vermont, and is there known as the Green Mountain range, which forms the eastern limit of the valley of Lake Champlain. In Canada, this range, stretching from the parallel of 45° north latitude to the Gulf, is known as the Notre-Dame Mountains, but to its north-eastern portion, the name of the Shickshock Mountains is often given.

The flank of the northern hills, known as the Laurentides, forms the north shore of the river and gulf, until within twenty miles of Quebec. It then recedes, and at the latter city is already about twenty miles distant from the St. Lawrence. At Montreal the base of the hills is thirty miles in the rear, and to the westward of this it stretches along the north side of the Ottawa River for about 100 miles, and then runs southward across both the Ottawa and the St. Lawrence, crossing the latter river a little below Kingston, at the Thousand Islands, and entering New York. Here the Laurentides spread out into an area of about 10,000 square miles of high lands, known as the Adirondack region, and lying between the lakes Champlain and Ontario. The narrow belt of hill-country which connects the Adirondacks with the Laurentides north of the Ottawa, divides the valley of the St. Lawrence proper from that of the great lakes, which is still bounded to the north by a continuation of the Laurentides. The base of these, from near Kingston, runs in a western direction, at some distance in the rear of Lake Ontario, until it reaches the south-west extremity of Georgian Bay on Lake Huron; after which it skirts this lake and Lake Superior, and runs north-westward into the Hudson Bay Territory. This great northern hill-region consists of the oldest known rock-formation of the globe, to which the name of the Laurentian system has been given, and occupies, with some small exceptions, the whole of the province northward of the limits just assigned. We shall designate it as the LAURENTIAN REGION. Over a small portion of this area, along lakes Huron and Superior, and farther eastward on Lake Temiscaming is another series of rocks, to which the name of the Huronian system is given. But as the country occupied by these rocks is geographically similar to the Laurentian, it is, for convenience, here included with it.

To the south of this region the whole of Canada west of Montreal, with the exception of the narrow belt of Laurentian country described as running southward across the Ottawa and St. Lawrence Rivers, is very level. The same is true to the eastward of Montreal until we reach the Notre-Dame range of hills, already described as passing southward into Vermont, and in its north-eastern extension as bounding the lower St. Lawrence valley to the south. This valley may be regarded geographically as an extension of the great plains of Western Canada and Central New York, with which it is connected through the valley of Lake Champlain. This level country to the south of the Laurentides in the two parts of the province is occupied by similar rock formations, and constitutes the CHAMPAIGN REGION of Canada, the surface of which is scarcely broken, except by a few isolated hills in the vicinity of Montreal, and by occasional escarpments, ravines, and gravel ridges farther westward.

The next area to be distinguished consists of the Notre-Dame range, on the south side of the St. Lawrence, which forms the belt whose course has just been described, with an average breath of from thirty to forty miles. To the south and east of this, is a district of undulating land, which extends to the boundaries of the province in that direction. These two districts may, for convenience, in farther description be classed together, and they embrace the region which is generally known as the EASTERN TOWNSHIPS. By this term they are distinguished from the SEIGNIORIES, which bound them to the north and west. To the north-east, however, along the Chaudière River, some few seigniories are found within the geographical limits of this third region.

The whole of the province is well watered with numerous large and small rivers, and in the mountainous districts there are great numbers of small lakes, more than 1,000 of which are represented on the maps.

We have, in the preceding description, divided the country into three distinct regions, and have next to consider the geological structure of these as related to the soil and to its agricultural capabilities.

THE LAURENTIAN REGION.—The great tract of country occupied by the Laurentian rocks has for its southern boundary the limits already assigned, and stretches northward to the boundary of the province, which is the height of land dividing the waters of the St. Lawrence basin from those of Hudson's Bay. Its area is about 200,000 square miles, or six-tenths of the whole land of the province. This region is composed exclusively of crystalline rocks, for the most part silicious, or granite-like in character, consisting of quartzite, syenite, gneiss, and other related rocks. These are broken up into ridges and mountain peaks, generally rounded in outline and covered with vegetation. The summits in the neighborhood of Quebec are some of them from 2,000 to 2,500 feet in height, and in other parts attain 4,000 feet or more; but the general level of this region may be taken at about 1,500 feet above the sea, although it is much less in the narrow belt which crosses the province east of Kingston. Through the hard rocks of this region run numerous bands of crystalline limestone or marble, which from their softness give rise to valleys, often with a fertile soil. The hill-sides are generally covered with little else than vegetable mould, which sustains a growth of small trees, giving them an aspect of luxuriant vegetation. But when fire has passed over these hills, the soil is in great part destroyed, and the rock is soon laid bare. In the valleys and lower parts of this region, however, there are considerable areas of good land, having a deep soil, and bearing heavy timber. These are the great lumbering districts of the country, from which vast quantities of timber, chiefly pine, are annually exported, and constitute a great source of wealth to the province. These valleys are in most cases along the bands of limestone, whose ruins contribute much to the fertility of the soil. Lines of settled country running many miles into the wilderness are found to follow these belts of soft calcareous rock.

The settlements in this region are along its southern border, and at no great altitude above the sea. In the higher parts, the rigor of the climate scarcely permits the cultivation of cereals, and it is probable that no great portion of this immense region will ever be colonized, but that it will remain for ages to come

(1) The following pages are extracted from a small pamphlet on Canada prepared by Dr. T. Sterry Hunt, at the request of the Minister of Agriculture, for distribution at the Exhibition held at Dublin in 1865. As containing a brief and popular description of the topography and the soils of the Province, they may not be without interest to our readers.

covered with forests. These, if husbanded with due care, will remain a perpetual source of timber for the use of the country and for exportation; besides affording, with proper facilities for transportation, an abundant supply of fuel to the more thickly settled districts where the forests have nearly disappeared, and where, from the severity of the long winters, an abundant supply of fuel is of the first necessity. There are other reasons why this great forest region should be protected. The vegetation, and the soil which now cover the hill-sides, play a most important part in retaining the waters which here fall in the shape of rain or snow. But for this covering of soil, the rivers and mill-streams which here take their rise, would, like the streams of southern France and of the north of Italy, be destructive torrents at certain seasons, and almost dried-up channels at others. The effect of this great wooded area in tempering the northern winds, and moderating the extremes of climate, is not tobe over looked in estimating the value of the Laurentian region..................

THE EASTERN TOWNSHIPS.— Under this head, as already explained, is included the belt of hill-country south of the St.-Lawrence, with the region on its south-east side, extending to the frontier, and forming a succession of valleys, which may be traced from the head-waters of the Connecticut north-eastward to the Bay of Chaleurs. It is true that the Eastern Townships, as now known, do not embrace this north-eastern extension; but as it belongs to them both geographically and geologically, it may be conveniently included with them.

The area whose limits are thus defined forms about one-tenth of the province. The hills of the range which traverses it are composed, like those of the Laurentian region, of crystalline rocks: but these are softer than the greater part of the rocks on the north shore, and yield, by their wearing down, a more abundant soil. Some of the hills in this range attain an elevation of 4,000 feet above the sea, and the principal lakes in the valley on the south-eastern side, Memphremagog, Aylmer, and St. Francis, are from 750 to about 900 feet above the sea-level. This region is well wooded, and when cleared, is found in most parts to have an abundant soil, generally sandy and loamy in character, and well fitted for grazing and for the cultivation of Indian corn and other grains. Great attention is now paid to the raising of cattle and the growing of wool, and, within the last few years, the best breeds of sheep have been successfully introduced from England and from Vermont. Draining and improved methods of farming are in many parts practised, and the agricultural importance of the southern portions of this region is yearly increasing...............

THE CHAMPAIGN REGION.— The limits of the great plains of Canada have already been defined in describing those of the two preceding regions. These plains, which may be called the champaign region, occupy about three tenths of the province, and are, as we have seen, divided into two parts by a low and narrow isthmus of Laurentian country, which runs from the Ottawa to the Adirondacks of New York. To the eastward of this division, the present region includes the country between that river and the St. Lawrence, and all between the Laurentides on the north and the Notre Dame hills on the south-east; while to the westward it embraces the whole of the province south of the Laurentian region, including the great area lying between the lakes Ontario, Erie and Huron, generally known as the south-western peninsula of Canada. The whole of this region. from east to west, is essentially a vast plain, with a sufficient slope to allow of easy drainage. The distance from Quebec to the west end of Lake Superior is about 1,200 miles, yet this lake is only 600 feet above the sea-level, while Lake Erie is 565 feet, and Lake Ontario 232 feet above the sea. The land on the banks of the St. Lawrence and its lakes, either near the margin or not very far removed, generally rises to a height of from fifty to one hundred and fifty feet, and from this level very gradually ascends to the base of the hills which bound the region.

Unlike the two regions already described, these great plains are underlaid by beds of unaltered Silurian and Devonian rocks, consisting of sandstone, limestones and shales. These are but little disturbed, and are generally nearly horizontal; but over by far the greater part of the region, they are covered by beds of clay, occasionally interstratified with or overlaid by sand and gravel. These superficial strata, which are in some parts several hundred feet in thickness, are throughout the eastern division, in great part of marine origin, and date from a time when this champaign region was covered by the waters of the ocean; while throughout the western division the clays are more probably of fresh-water origin. It results from the distribution of these superficial post-tertiary strata, that the soil over the greater part of the region consists of strong and heavy clays, which in the newly cleared portions are overlaid by a considerable thickness of vegetable mould. In the eastern division, a line drawn from Quebec to Ottawa, and two others from these points, converging at the outlet of Lake Champlain, will enclose a triangular area of about 9000 square miles, which is very nearly that occupied by the marine clays. These are overlaid, chiefly around the borders of this space, by more sandy deposits, which are well seen near Three Rivers, and about Sorel. They form a warm but light soil, which yields good crops when well manured, but is not of lasting fertility. The greater part of this area however is covered by a tenacious blue clay, often more or less calcareous, and of great depth, which constitutes a strong and rich soil, bearing in abundance crops of all kinds, but particularly adapted for wheat, and was in former times noted for its great fertility. These clay lands of Lower Canada have been for a long time under cultivation, and by repeated cropping with wheat, without fallow, rotation, deep plowing, or manure, are now in a great many cases unproductive, and are looked upon as worn out or exhausted. A scientific system of culture which should make use of deep or sub-soil ploughing, a proper rotation of crops, and a judicious application of manures, would however soon restore these lands to their original fertility. The few trials which, within the last few years, have been made in the vicinity of Montreal and elsewhere, have sufficed to show that an enlightened system of tillage, with sub-soil draining, is eminently successful in restoring these lands, which offer at their present prices good inducements to skilled farmers. Besides grain and green crops, these soils are well fitted for the culture of tobacco, which is grown to some extent in the vicinity of Montreal. Notwithstanding the length of the winter season in Canada, the great heat and light of the summer and the clearness of the atmosphere enable vegetation to make very rapid progress.

To the north-east of Quebec, besides the plains which border the river, there is a considerable area of low-lying clay land, cut off from the great St. Lawrence basin by Laurentian hills, and occupying the valley of Lake St. John and a portion of the Saguenay. Here is a small outlying basin of Lower Silurian rocks, like those about Montreal, and overlaid in like manner by strong and deep clays, which extend over the adjacent and little elevated portion of the Laurentian rocks, and form a soil as well fitted for cultivation as any part of the lower St. Lawrence valley. The valley of this lake is probably not more than 300 feet above the sea; and from the sheltered position, the climate is not more rigorous than that of Quebec. Several townships have within a few years been laid out in this valley and have attracted large numbers of French Canadians from the older parishes in the valley of St. Lawrence.

The western part of the champaign region, commencing near Kington and including all the southern portion of the western province. is the most fertile and productive part of Canada. Like the plains further eastward, its soil consists chiefly of strong clays, overlaid here and there by loam, sand, and gravel. In the natural state nearly the whole of this region supported a fine growth of timber, in great part of broad-leaved species, but presented however various local peculiarities. Thus, the banks of the Grand River from Galt to Brantford were remarkable for a sparse growth of oaks, free from underwood, and known as oak openings. These are said to have been pasture grounds of the Indians, brought to this condition and kept in it by partial clearing, and by the annual burning of the grass. The object of this was to attract the deer that came to feed upon the herbage.

The soil of these plains is a light sandy loam, very uniform in character, and generally underlaid by coarse gravel. Though fertile, and of easy tillage, this and similar soils will not support the long continued cropping without manure, which is often practiced on the clay lands of both Upper and Lower Canada.

The valley of the Thames, together with the rich alluvial flats which extend from it northward to the north branch of Bear Creek, and southward nearly to the shore of Lake Erie, is remarkable for its great fertility, and its luxuriant forest growth. The soil is generally clay, with a covering of rich vegetable mould, and is covered in the natural state with oak, elm, black-walnut and tulip trees (*Liriodendron tulipifera*) of large size, together with fine groves of sugar-maple. Towards the mouth of the Thames, and on the borders of Lake St. Clair, is an area of natural prairie of about 30,000 acres. It lies but little above the level of the lake, and is in large part overflowed in the time of the spring floods. The soil of this prairie is a deep unctuous mould, covered chiefly with grass, with here and there copses of maple, walnut and elm, and with willows dotting the surface of the plain. Numbers of half-wild horses are pastured here, and doubtless help to keep down the forest growth. The characters of the surface are such as to suggest that it had been at no distant period reclaimed from the waters of the adjacent lake.

In no part of the province have skilled labour and capital been so extensively applied to agriculture as in Western Canada, and the result is seen in a general high degree of cultivation, and in the great quantities of wheat and other grains which the region annually furnishes for exportation; as well as in the excellent grazing farms, and the quantity and quality of the dairy produce which the region affords. This western portion of the province, from its more southern latitude, and from the proximity of the great lakes, enjoys a much milder climate than the other parts of Canada. The winters are comparatively short, and in the more southern sections the peach is successfully cultivated, and the chestnut grows spontaneously.— *Canadian Naturalist.*

Leaves from Gosse's Romance of Natural History.

(*Concluded.*)

THE TERRIBLE.

Man's connexion with the creation around him occasionally brings him into circumstances of more serious result than a temporary excitement of the imagination, and a thrilling of the nerves, which might be on the whole rather pleasant than otherwise. He was indeed invested with lordship over the inferior creatures, and in general they own his dominion; but many of them are endowed with powers for evil, to which he can oppose no effectual resistance; at least, none so invariably effectual, but that occasions occur in which the mastery is reversed. Some are furnished with enormous weight and strength, able to crush him with mere brute momentum; others carry formidable weapons, horns and hoofs, claws and teeth, tusks and fangs, wielded with consummate skill, and made more effective by the aid of muscular strength, fleetness of pace, agility, instinct of combination, or cunning strategy. Others, small and apparently contemptible, are yet armed with implements so terribly lethal, that the slightest puncture of the skin by one of them, darted too with lightning-like rapidity and almost unerring precision, is inevitably and immediately followed by the most horrid form of death.

And the creatures are conscious of their own powers; and, though they will often tacitly own man's supremacy by declining a contest with him, yet there are circumstances ever and anon occurring,—hunger sometimes, sometimes rage, or the desparation induced by escape being cut off which makes the helpless bold,— in which they are willing to try "the wager of battle" with their liege.

The stern conflict for life, when man stands face to face with his bestial foes, has given many a romantic page to the annals of natural history; and too many such pages are stained with the harrowing record of their grim victory, and his bloody death. We cannot therefore ignore them in the aspect of natural science which we are considering; but we may content ourselves with a few examples of the terrible: the difficulty lies in the selection from the profusion of *matériel.*

Throughout the north temperate zone the wolf is a cruel and bloodthirsty foe of man, making up by a scent like that of the hound, a patient perseverance, and a habit of combining in numbers in common pursuit, what it lacks in individual power. Yet, individually, a wolf is able to pull down an unarmed man, and, when pressed with famine in severe winters, it becomes very daring. In our own island its ravages have long ago induced its extirpation; but in a remote era houses were erected at certain intervals by the road-sides, to serve as places of refuge against the assaults of the wolves; and January was by our Anglo-Saxon ancestors called "Wolf-monat," (Wolf-month,) because more people were devoured by wolves in that month than at other times.

In the north and east of Europe, the danger incurred by travellers in sledges of being hunted by packs of hungry wolves is very great; and many dreadful incidents bear witness to their success. A very horrible one is narrated by Mr Lloyd. A woman, accompanied by three of her children, was one day travelling in this mode, when she discovered that she was pursued by these gaunt foes in full pack. She immediately put the horse to a gallop, and drove towards her home, from which she was not far distant, with all possible speed. All, however, would not avail, for the ferocious animals gained upon her, and at last were on the point of rushing on the sledge. For the preservation of her own life, and that of the remaining children, the poor frantic creature now took one of the babes and cast it a prey to her blood-thirsty pursuers. This stopped their career for a moment, but, after devouring the little innocent, they renewed their pursuit, and a second time came up with the vehicle. The mother, driven to desperation, resorted to the same horrible expedient, and threw her ferocious assailants another of her offspring. To cut short this melancholy story, her third child was sacrificed in a similar manner. Soon after this the wretched being, whose feelings may more easily be conceived than described, reached her home in safety.

Mr Atkinson has sketched, with his usual graphic vigour, the situation of himself and his party of Kalmucks, when surrounded by wolves in Mongolia. They were encamped for the night on the open steppe on the banks of a little lake, when suddenly the howling of the terrible wolves was heard at a distance. The men quickly collected the horses, and prepared to receive the assailants. The fire was nearly out, but it was thought best to allow them to approach, and then by a little fresh fuel obtain light enough for a fair shot. It was not long before the padding of their many feet was heard as they galloped towards the party, and presently, a savage howl arose. The men threw some dry bushes on the embers, and blew up a bright flame, which sent its red glare far around, disclosing the pack with ears and tails erect, and flashing eyes. At a signal, five rifles and a double-barrel poured in a volley with deadly effect, as the horrible howling revealed. Snarling and shrieking, the pack drew off, but the Kalmucks declared they would return.

Soon the terror of the horses annonced the re-approach of the marauders, and they could be heard stealing round between the encampment and the lake, dividing into two packs, so as to approach on opposite sides. Presently the glare of their eyeballs was seen, and their grizzly forms pushing one another on. Again the bullets sped, and the shrieking packs again retreated, but only to keep watch at a little distance.

The night now grew very dark, and all the fuel was exhausted. Presently, a distant howling announced the approach of a new pack, on whose arrival the old ones, which had been silently biding their time, began to manifest their presence by jealous growls, which soon gave way to a general fight among themselves. Some of the men now, well armed, crept along the margin of the lake to collect more fuel, which was then placed on the fire. The flame was blown up, and a group of eight or ten wolves was seen within fifteen paces, with others beyond. The rifles once more cracked, and the packs with a frightful howl scampered off.

In the morning eight wolves were lying dead, and the bloody tracks shewed that many others had carried away mortal wounds, the reminiscences of this fearful night.

The brown bear of Europe is of formidable strength, and sufficiently bold occasionally to be a serous antagonist, as numerous adventures of Mr Lloyd and other northern sportsmen testify. Though it can subsist on fruits, grain, and honey which involve no destruction of animal life, yet it is predaceous and ferocious too. The ancient Romans made use of Scottish bears to augment the horrors of public executions:—

"Nuda Caledonio sic pectora præbuit urso,
Non falsâ pendens in cruce, Laureolus."

The ferocity of the Syrian bear is illustrated by many passages of

Sacred Writ, and in particular by the narrative which records the slaughter of the forty-two youths, who mocked Elisha, by two she-bears, (2 Kings ii. 24.) And the Polar bear is a truly savage and powerful animal.

But no species of the genus can compare with the grizzly bear of the North American prairies, for either, size, strength or ferocity. The names of *Ursus ferox* and *U. horribilis*, which have been given to it, re-echo the prevailing ideas of its terrible character. Even the savage bison, vast and mighty as he is, falls a prey to the grizzly bear, which can drag the carcass, though a thousand pounds in weight, to its haunt. Lewis and Clarke measured one which was nine feet in length.

The hunters and trappers of the Rocky Mountains delight to tell, over their camp fires, stories of personal encounters with this formidable savage. Many of these stirring incidents have found their way into print, and one of them I shall here condense.

A Canadian named Villandrie, pursuing his occupation of a free trapper on the Yellow-stone River, had acquired by his skill and daring the reputation of the best white hunter in the region. One morning, when he was riding out to have a look at his beaver traps, he had to break his way through some thick bushes that grew on a high bank above a small river. He was going along, pushing back the twigs with the barrel of his rifle, and keeping an eye on the bank, when all at once he found himself close to an old she grizzly bear, which rose instantly and dashed furiously at the horse, as he was struggling with the shrubs and bushes. One blow of her colossal paw was enough to break his back, and to throw Villandrie down the bank, his rifle falling into the water. Three half-grown cubs now occupied themselves with the poor struggling horse, while the raging mother rushed towards the trapper, who was just getting up; but before he had well drawn his long knife, the bear's claws were on his left arm and shoulder. His right arm he could still move freely, and he inflicted stab after stab in the neck of his fierce enemy, which did not on that account relax her gripe, but tried to catch the knife with her teeth. At every movement he made, she seemed to ding deeper into his shoulder and loins.

The struggle had not lasted a minute, when the sandy bank suddenly gave way, and down the combatants went into the water. Fortunately for Villandrie, the sudden cold bath made the bear loose her hold: she returned to her cubs, and left her mangled antagonist to get away as well as he could. The next day he reached a Sioux village, very much exhausted from loss of blood; but he got his wounds tolerably healed, aud still maintained his character of the best white trapper on the Yellow-stone.

Recent travellers in Africa have made us somewhat familiar with the mighty and ferocious brutes of that arid continent, the very metropolis of bestial power. Not only have the missionary, the colonist, and the soldier encountered the lordly animals in their progress into the wilderness, but hunters, either for sport or profit, have gone in search of them, bearded the lion by his midnight fountain, and provoked the elephant to single combat in his forest fastnesses. Fearful adventures have hence ensued, the records of which have thrilled us dwellers at home by our winter firesides. One or two of these I may select for illustration of the terrible in natural history.

Nothing is more appalling in the way of animal voices than the scream, or "trumpeting," as it is called, of an enraged elephant. The hunting of this animal in South Africa is awful work. To stand in front of a creature twelve feet high, infuriated to the utmost, to hear his shriek of rage, to see him come crashing on with an impetus that throws the very trees out of the ground, needs all the nerve and all the courage that man can bring to the conflict. Livingstone says that the terrible "trumpet" is more like what the shriek of a French steam-whistle would be to a man standing on a railway, than any other earthly sound. So confounding is it, that a horse unused to the chase will sometimes stand shivering, and unable to move, instead of galloping from the peril. Gordon Cumming has depicted a stirring scene, in which, having dismounted to fire at an elephant, he was immediately charged by another; his horse, terrified by being thus placed between two enraged monsters, refused to be mounted; and it was only when he expected to feel a trunk clasping his body, that he managed to spring into the saddle.

Even when mounted, the legs of the steed will sometimes fail from terror, and he falls with his rider; or, from the character of the forest, the latter may be dragged from his seat during the flight, and thus be left helpless before the furious beast, exposed to be inpaled by the long tusks, or crushed into a mummy by the enormous feet.

An adventure of this sort with an elephant befel one who has had more narrow escapes than any man living, but whose modesty has always prevented him from publishing anything about himself. On the banks of the Zouga, in 1850, Mr Oswell pursued one of these animals into the dense, thick, thorny bushes met with on the margin of that river, and to which the elephant usually flees for safety. He followed through a narrow pathway, by lifting up some of the branches and forcing his way through the rest; but when he had just got over this difficulty, he saw the elephant, whose tail he had got glimpses of before, now rushing towards him. There was then no time to lift up branches, so he tried to force the horse through them. He could not effect a passage; and, as there was but an instant between the attempt and failure, the hunter tried to dismount; but, in doing this, one foot was caught by a branch, and the spur drawn along the animal's flank; this made him spring away and throw the rider on the ground, with his face to the elephant, which being in full chase, still went on. Mr Oswell saw the huge fore-foot about to descend on his legs, parted them, and drew in his breath as if to resist the pressure of the other foot, which he expected would next descend on his body. He saw the whole length of the under part of the enormous brute pass over him; the horse got away safely. Dr. Livingstone, who records the anecdote, has heard but of one other authentic instance in which an elephant went over a man without injury; and, for any one who knows the nature of the bush in which this occurred, the very thought of an encounter in it with such a foe is appalling. As the thorns are placed in pairs on opposite sides of the branches, and these turn round on being pressed against, one pair brings the other exactly into the position in which it must pierce the intruder. They cut like knives. Horses dread this bush extremely; indeed, most of them refuse to face its thorns.

Occasionally, however, the elephant-hunter falls a victim to his daring. A young and successful ivory-hunter, named Thackwray, after numberless hair-breadth escapes, at length lost his life in the pursuit. On one occasion, a herd pursued him to the edge of a frightful precipice, where his only chance of safety consisted in dropping down to a ledge of rock at some distance below. Scarcely was he down before one of the elephants was seen above, endeavouring to reach him with its trunk. The hunter could easily have shot the brute while thus engaged, but was deterred by the fear of the huge carcass falling down on him, which would have been certain destruction. He escaped this danger, but soon afterwards, almost at the very same spot, he met the fatal rencontre. With one attendant Hottentot, Thackwray had engaged a herd of elephants, one of which he had wounded. The Hottentot, seeing it fall, supposed that it was dead, and approached it, when the animal rose and charged furiously. The lad threw himself upon the ground, and the infuriated beast passed without noticing him, tearing up the trees and scattering them in its blind rage; but, rushing into a thicket where Thackwray was reloading his rifle, it caught sight of him, and in an instant hurled him to the earth, thrusting one of its tusks through his thigh. It then caught the wretched man in its trunk, and elevating him in the air, dashed him with great force upon the ground, kneeling and trampling upon him, and as it were kneading his crushed and flattened corpse into the dust, with an implacable fury. The remains, when discovered, presented a most appalling spectacle. More recently, another ivory-hunter, named Wahlberg, met a fate almost precisely parallel.

Little inferior to the elephant in strength, though by no means approaching it in sagacity, the different species of African rhinoceros manifest an irascibility against man which waits not for provocation; or rather the sight of a man is itself a sufficient provocation to excite a paroxysm of restless fury. Steedman mentions a Hottentot who had acquired a reputation as a bold elephant-hunter, who on one occasion had his horse killed under him by a rhinoceros. Before he could raise his gun, the enormous beast rushed upon him, thrust its sharp-pointed horn into the horse's chest, and threw him boldly, rider and all, over its back. The savage animal then, as if satisfied, went off, without following up its victory, and before the Hottentot could recover himself sufficiently for an avenging shot.

Mr Oswell met with a similar rencontre. He was once stalking two of these beasts, and, as they came slowly to him, he, knowing that there is but little chance of hitting the small brain of this animal by a shot in the head, lay, expecting one of them to give his shoulder, till he was within a few yards. The hunter then thought that by making a rush to his side he might succeed in escaping; but the rhinoceros, too quick for that, turned upon him, and though he discharged his gun close to the animal's head, he was tossed in the air. "My friend," adds Dr. Livingstone, who gives the account, "was insensible for some time, and on recovering found large wounds on the thigh and body. I saw that on the former part, still open, and five inches long." The white species, though less savage than the black, is not always quite safe, for one, even after it was mortally wounded, attacked Mr. Oswell's horse, and thrust the horn through to the saddle, tossing at the same time both horse and rider.

The buffalo of the same regions is another animal of remarkable savageness of disposition, making an encounter with him a formidable affair. The eminent Swedish botanist, Thunberg, was collecting

plants in a wood with two companions, when a buffalo bull rushed on the party with a deafening roar. The men just saved their lives by springing into the trees, while two horses were speedily pierced through by the powerful horns, and killed.

EDUCATION.

The Duty of Parents to Teachers.

To secure results in carrying on reforms and improvements in society, co-operation is essential to success. The humblest can effect in concert, what the highest could not singly. In the education of youth, parents and guardians can greatly facilitate the arduous labor of the teachers. Good government in school is more the result of careful training at home, than of any efforts of the teacher. Children who behave well at home, will generally deport themselves well abroad. Children should be taught at home respect for their teachers. They should be instructed that it is their duty to be orderly, well-behaved and prompt to obey what they are commanded to perform. If this be understood, the task of the teacher becomes materially lightened. If the pupil be taught that the rules of school must be implicitly complied with, and if the parent insist upon it that the child shall obey all reasonable demands made upon him by the teacher, then the pupil will be properly trained, and will be fitted to receive instruction. Parents are too apt to encourage their children in tale-bearing and criticism on the conduct and ability of their instructors. They are apt to take the views of their children rather than their own.

While we adhere to that system of having school for only a few months in the year and of choosing teachers frequently, we may expect frequent changes in the " rules of school." The ideas of no two persons entirely agree, nor does the manner of imparting instruction, or of governing the school-room of teachers coincide. This thing is inseparable from our present system, and until we are willing to adopt a better one we must do as well as we can with the material we possess. Not only will different modes of instruction be practiced, but new books will be required. All these things must be endured. The teacher who has been taught out of a certain class of text books, has the same desire to use that kind of work as the mechanic, to be effective, will require the use of a favorite plane and saw. He must, to use a homely phrase, " get the hang of the thing," before he can accomplish much. Parents should provide the necessary books, for if the pupil is not supplied he cannot make that proficiency he should.—The mechanic requires good tools to make a good job, and it is economical to furnish them ; so it is in regard to books. The best text books should be selected. Such books will awaken interest and impart instruction. They are the tools with which the educational fabric is to be constructed, and with skilful workmanship and good materials we may expect a good structure.

Parents should also make it a point to become acquainted with their teachers. By being intimate with each other, they can discuss the topics of educational interests in their own districts, and devise such measures as may be best calculated to succeed. The spirit of friendship begets that of frankness and confidence, and the teacher feeling that his efforts are appreciated, will labor not only more industriously, but much more effectively. We say to parents, therefore, you must sympathize with, and encourage your teachers. Cheer them on in their arduous work.—Visit the school frequently, and let your children feel that you are interested in their improvement.—Labor to create a good feeling between your children and your teacher, to build up a confidence in each other and to encourage all to do ther best. By this means you will promote your own happiness and interest, and render efficient service in the cause of education and improvement.—*York True Democrat.*

Multiplicity of Studies.

One of the most popular errors which now prevails in our public schools, is the number and variety of studies required of children. Many pupils are expected to study from ten to fourteen branches at the same time, and the result is, that they can seldom give that degree of attention to any which is necessary in order to master it properly. Lessons are thus hastily prepared, indifferently recited, and speedily forgotten. Some studies are recited but once or twice a week, and bitter experience has convinced us of the folly of this system. The studies should be few in number—seldom more than five or six—the lessons short, throughly prepared, and daily recited. By pursuing this plan only can we expect to make good scholars and thinking men and women.

Education does not consist in merely cramming the mind with a multitude of facts and principles. The practice of many would lead one to infer that they considered the mind a great reservoir into which they can pour vast streams of multifarious knowledge indiscriminately. The mind is a living, working organism. Food is necessary for its healthy action. Facts and principles constitute this food, and it will benefit it but little, unless it is suitable in quality, regularly taken, and well digested. Now by this system of over-taxing and confusing the mind with so many studies, it is utterly impossible to secure any great degree of mental culture. The object of attending school is not so much to secure a vast amount of knowledge, as it is to train the mind to habits of study and observation, and to teach children how to think. A certain amount of book-knowledge is necessary; but this is not, as many suppose, the *main* object. The facts and principles learned in school are *only* a foundation upon which to build an education. The habits of thought there acquired form only a basis for more extended thought in the future.

Taking this broad view of the subject, we contend that a few things well learned and fixed for life will be of much more use than a great mass of facts hastily committed to memory, not properly digested, and soon so far forgotten as to leave but indistinct impressions.—*Dem. Standard.* B. E.

" Right About Face."

I was sitting at my window one morning, when I heard Frank's clear, boyish voice, shouting, " Right about face ! " I looked out and saw in the green below a number of little boys drawn up in battle array, with Captain Frank at their head. He was drilling his company, and had got them into " something of a fix." A trellis was on one side of them and a cluster of lilac bushes on the other, while a fence directly in front of them obstructed their further progress in that direction. But Frank, drawing himself up the last inch of his height, and putting on a stern countenance, gave the word, " *Right about,—Right about,*—(and instantly each little right foot is drawn back " in position," each little right hand is placed on the side)—*Face !* " and, lo ! we had their little faces full in view.

It is often a wise move to come to a " *Right about face.*" When we are tempted to do anything which we know to be wrong, if we pause a moment and consider, we may see the safety of coming to the " *Right about face.*" If our companions tease us to smoke, to swear, to tell falsehoods, or to go into bar-rooms with them, we shall do well not to listen to their wicked words, but just come to the " *Right about face* " at once, and leave them ; for if we yield to their entreaties and forward march, we may soon find ourselves in a narrow place, where it will be no easy matter to turn about. Do not stop and stand still either, but come to the " *Right about face,*" and march away. Not only " cease to do evil," but " learn to do well."— *Children's Paper.*

OFFICIAL NOTICES.



BOOKS APPROVED BY THE COUNCIL OF PUBLIC INSTRUCTION.

His Excellency the Administrator of the Government in Council was pleased, on the 28th November last, to approve of the Resolution passed by the Council of Public Instruction for Lower Canada, on the 12th October last, approving of the following School Books on the recommendation of the Catholic Members of the Book Committee, viz.:

Nouvelle Méthode pour apprendre à bien lire; par J. E. Juneau.

The Catholic School Book, containing easy and familiar lessons for the instruction of youth.

Nouvelle Méthode d'Ecriture, publiée par Eusèbe Senécal, en 7 cahiers, Montreal, 1865.

Psautier de David, suivi des hymnes qui se chantent dans les différents temps de l'année, Mame, Tours, 1858.

Louis Giard,
Recording Clerk.

APPOINTMENTS.

COUNCIL OF PUBLIC INSTRUCTION.

His Excellency the Administrator of the Government has been pleased, by commission dated 16th instant, to appoint the Honorable Sir Narcisse Fortunat Belleau a member of the Council of Public Instruction for Lower Canada, to replace the late Hon. Sir Etienne P. Taché.

EXAMINERS.

His Excellency the Administrator of the Government in Council was pleased, on the 28th November last, to make the following appointments, viz.:

The Reverend John Monroe Gibson, B.A., and Alexander Johnson, Esquire, LL.D., to be members of the Protestant Board of Examiners of Montreal, in the room of the Reverend A. F. Kemp and the Reverend John Irwin, who have left the limits.

The Reverend F. X. Morin, *curé* of St. Alphonse, and F. H. O'Brien, Esquire, Advocate, to be members of the Board of Examiners of Chicoutimi, in the room of the Reverend Mr. Martel and J. B. Plamondon, Esq., Advocate, who have left the limits.

PROFESSORS IN NORMAL SCHOOLS.

His Excellency the Administrator of the Government in Council was pleased, on the 18th inst., to approve of the following appointments, viz.:

Mr. Tancrède George Dostaler, Associate Professor in the Jacques Cartier Normal School, to be Ordinary Professor in said School, in the room of Mr. Léopold Devisme, resigned.

Mr. Joseph Octave Cassegrain, Teacher, of Montreal, to be Associate Professor in the Jacques Cartier Normal School, in the room of Mr. Tancrède George Dostaler, promoted.

SCHOOL COMMISSIONERS.

His Excellency the Administrator of the Government in Council was pleased, on the 18th inst., to approve of the following appointments of School Commissioners:

County of Quebec.—Tewkesbury: Messrs. Louis Pageau, Jean Loignon, Patrick Flynn, Ferdinand Deschamps and Narcisse Clavet.

County of Pontiac.—Portage du Fort: Messrs. George Edward White and Robert Findlay.

County of Drummond.—Durham: Messrs. Benjamin Reed and George B. Placey.

County of Dorchester.—St. Isidore: Mr. Narcisse Girard.

County of Terrebonne.—Ste. Agathe-des-Monts: Messrs. Narcisse Ménard and Joseph Giroux.

County of Gaspé.—Rivière-au-Renard: Rev. Louis Blais, Priest.

ERECTIONS, &c. OF SCHOOL MUNICIPALITIES.

His Excellency the Administrator of the Government in Council was pleased, on the 28th November last,

To erect into a separate municipality for school purposes, under the name of *Municipality of Miguasha*, that portion of the territory of Nouvelle, in the County of Bonaventure, bounded on the east and south by the Bay of Chaleurs, on the south-west by the School Municipality of Shoolbred to the land of Isaac Pentland, not included; on the north-west, by the land belonging to John Vibert, not included; and on the north, by the place called Barachois.

His Excellency the Administrator of the Government in Council was pleased, on the 18th inst.,

1. To detach the following portions of territory from the School Municipality of Stoneham, in the County of Quebec, to wit: Ranges Nos. 5, 6, 7, and 8 of each of the Townships of Stoneham and Tewkesbury, now included in the said Municipality, and to erect the said Ranges Nos. 5, 6, 7, and 8 into a separate school municipality by the name of the *School Municipality of Tewkesbury*.

2. To erect the following portion of territory into the *School Municipality of Claridorme*, in the County of Gaspé, to wit: that tract of land which extends towards the east from the Great Pond, inclusive, to the Point called *Pointe à la Frégate* towards the west.

3. To erect into a school municipality, under the name of the *School Municipality of Grande Vallée*, in the County of Gaspé, all that portion of territory extending from the point known as *Pointe de la Petite Vallée* towards the east, to the Point of *Grande Vallée*, towards the west.

4. To detach from the Municipality of Malbaie, in the County of Gaspé, all that portion of territority extending on the east, from the residence of Michael Buckley, and on the west, to the boundary line of the Township of Percé, and to erect the same into the *School Municipality of Barre-à-Choir*.

DIPLOMAS GRANTED BY THE NORMAL SCHOOLS.

M'GILL NORMAL SCHOOL.

Diploma for Academy.—Mr. Edward H. Krans.

DIPLOMAS GRANTED BY BOARDS OF EXAMINERS.

BOARD OF PROTESTANT EXAMINERS OF QUEBEC.

1st Class Model School (E.)—David Macmurray.

1st Class Elementary (E. & F.)—Miss Mary Matilda Sturrock.

2nd Class Elementary (E.)—Misses Bertha Baxter, Caroline Hall, Christina McKinnon and Helen Wilson.

Nov. 7, 1865.

1st Class Elementary (E.)—Miss Helen Jane Williamson.

Nov. 14, 1865.

D. Wilkie,
Secretary.

QUEBEC BOARD OF CATHOLIC EXAMINERS.

2nd Class Elementary (F.)—Misses Horméline Baudoin, Françoise-Eugénie Bernier, Sophronie Boutin, Marie Boutin, Sara Côté, Julie Duval, Eloïse Fournier, Caroline Leclerc and Marie-Obéline Prémont; *(E.)* Miss Catherine Horan.

Nov. 7, 1865.

N. Lacasse,
Secretary.

MONTREAL BOARD OF PROTESTANT EXAMINERS.

1st Class Model School (E. & F.)—Miss Emma A. Hunt.

1st Class Elementary (E.)—Messrs. James E. Lawrence, Zephaniah S. Lawrence; Misses Almira Cass, Sarah Ann Kelly and Esther Little.

2nd Class Elementary (E.)—Misses Elizabeth Latham, Harriet McLennan and Isabella Mott.

Nov. 9, 1865.

T. A. Gibson,
Secretary.

MONTREAL BOARD OF CATHOLIC EXAMINERS.

1st Class Elementary (F.)—Misses Marie-Louise-Julie Limoges, Marguerite-Hélène Tétreault, Marie-Virginie Bourdon, Agnès Champagne Beaugrand and Angélique-Caroline Chèvrier.

August, 1865.

1st class Elementary (E.)—Misses Exérie Bélanger, Rose de Lima Bourdon, Lucie Guertin, Cécile Foucault, Marguerite Galarneau and Clotilde Lantagne.

Nov. 7, 1865.

F. X. Valade,
Secretary.

BOARD OF PROTESTANT EXAMINERS OF WATERLOO AND SWEETSBURG.

1st Class Elementary (E.)—Misses Jenny Burns, Alice Douglas, Roxanna E. Shephard, Julia Scovill, Mary A. Todd and Nancy Todd.

2nd Class Elementary (E.)—Messrs. Samuel J. Donaldson and Ernest M. Taylor; Misses Polly Blake, Charlotte Coburn and Arretta E. Hoyt.

Nov. 7, 1865.

Wm. Gibson,
Secretary.

BOARD OF EXAMINERS FOR CHICOUTIMI, CHARLEVOIX AND SAGUENAY.

1*st Class Elementary* (*F.*)—Misses Suzanne Laforest and Marie Tremblay.

Nov. 7, 1865.

THS. H. CLOUTIER,
Secretary.

BOARD OF EXAMINERS OF SHERBROOKE.

1*st Class Academy* (*E.*)—Mr. Edward Johnson ; (*E. & F.*)—Miss Helen C. Hurd.

1*st Class Elementary* (*E.*)—Mr. Sylvester Lebourneau, Alvan Curtis ; (*F.*)—Miss Elmire Béliveau.

2*nd Class Elementary* (*E.*)—Mr. David Rennie ; Miss Maria Osgood and Miss Mary Jane Cowan ; (*F.*)—Miss Aurélie Ducharme and Miss Emélie Biron.

Nov. 7, 1865.

S. A. HURD,
Secretary.

BOARD OF EXAMINERS OF RICHMOND.

1*st Class Elementary* (*E.*)—Misses Emily Burbank, Julia Wilson, Sarah Jane Davis, Josephine Smith and Fanny Chappuis.

2*nd Class Elementary* (*E.*)—Mr. John Cook : Misses Eveline Charlotte Smith, Margianna Elizabeth Cassidy, Louisa Electa Derby, Jannet Skinner, Rosanna Neill, Mary Anne Bennett, Emeline Leavitt and Jane Nixon ; (*F.*)—Misses Clarisse Hébert and Julie Verville.

Nov. 7, 1865.

J. H. GRAHAM,
Secretary.

BOARD OF EXAMINERS OF BEAUCE.

1*st Class Elementary* (*F.*)—Miss Philomène Ferland.

Nov. 7, 1865.

J. J. P. PROULX,
Secretary.

OTTAWA OR AYLMER BOARD OF EXAMINERS.

1*st Class Elementary* (*E.*)—Misses Elizabeth A. Symmes and A. Priscilla Singleton.

2*nd Class Elementary* (*E.*)—Misses Esther Ann Baker, Mary Daley and Jane McEwen.

Nov. 7, 1865.

JOHN R. WOODS,
Secretary.

DONATIONS TO THE LIBRARY OF THE DEPARTMENT.

The Superintendent of Education acknowledges with thanks the following donations :

From the Very Rev. Superior of the Seminary of Montreal : Histoire de la Colonie Française en Canada, 2 vols.

From the Rev. Secretary of the archdiocese of Quebec : Le Nouveau Testament, par Mgr. Baillargeon.

From the Mayor and Corporation of Montreal : Laws and Regulations of the City of Montreal (English and French), 2 vols.

TEACHER WANTED.

A male Teacher, with a diploma authorizing him to teach in schools under public control, is required to conduct a Model School in the Municipality of Bury. This school is attended by about forty pupils, boys and girls, some of whom are learning French. A Teacher competent to teach music, besides the usual branches, would be preferred. Address Mr. Nathaniel Ebbs, Secretary-Treasurer to the Board of School Commissioners, Bury, County of Compton, C. E.

JOURNAL OF EDUCATION.

MONTREAL (LOWER CANADA), DECEMBER, 1865.

To Our Subscribers.

With this, the last number of the Ninth Volume of the *Journal of Education*, our subscribers will receive as usual the table of contents for the year just ended, and an almanac for 1866. To the last we would call the attention of teachers and all other persons entrusted with the administration of the School Laws, as it contains information which they may absolutely require. By keeping this sheet within reach and glancing over its contents from time to time, Secretary-Treasurers will be assisted in punctually discharging, conformably to the requirements of the law, some of their most important duties.

We must also take this opportunity of informing those among our subscribers who have not yet paid their subscriptions for 1865, that their names will be struck from our list in all cases in which a remittance shall not have been received before the publication of our next number ; we shall also be compelled, however much we may regret it, to sue for payment of all arrears.

The Right of Non-Residents to become Dissentients.—Judge Sicotte's Decision.

Below will be found the decision rendered by Hon. Justice Sicotte in the case of the School Commissioners of St. Bernard de Lacolle *vs.* Joseph C. Bowman, which we promised to lay before our readers. The point, as we had occasion to explain, has already been decided, first by Mr. Justice Coursol, who took the same view of the law as Judge Sicotte, and secondly by Hon. Justice Short, whose judgment was the reverse. The question is, whether a non-resident proprietor can or cannot legally declare himself a dissentient.

The reasons on which Judge Short based his judgment were, if we recollect rightly, as follows : 1st. The word *inhabitant* can only mean a resident, and the law in giving the *inhabitants* forming the religious minority the right of dissent, had in view *residents* only ; 2nd, had it been intended to extend this right to non-resident proprietors, a clause to that effect would have been inserted, or the word *rate-payer*, which occurs elsewhere in the same Act, would have been employed ; 3rdly, the right of becoming a dissentient is purely personal and exceptional, and should not be exercised except within the strict meaning of the law. The object which the latter has in view is to allow the minority of a municipality to send their children to such schools as they shall approve of,—a reason which does not apply to non-residents, who are not supposed to have any children within the municipality.

The reasons on which Judge Sicotte's judgment rests may be summed up thus : 1st. The word *inhabitant* does not (in the legal and administrative sense) necessarily signify *resident.* Many authorities are cited to show that in the legislation of England and Canada the words *inhabitants* and *proprietors* or *land holders* are looked upon as synonimous terms. 2nd. The doubts which have existed in this country, and the lawsuits that have taken place in consequence, show that the word *inhabitant* has not always been held to mean a resident. The hon. Judge also cited (as confirming the view he has taken of the question) the Bill introduced into the Legislative Assembly with the assent of the Department of Public Instruction, and which contemplated a settlement of this point. [The Bill here alluded to was introduced by Mr. Sicotte while Attorney General, but a change having occurred at that time in the Administration, and Parliament having been dissolved immediately afterwards, no discussion took place with regard to this measure. We have at different times alluded to it in this journal, and it will be seen by the last Report of the

Superintendent of Education that the attention of the Government has again been called to the subject.] 3rd. The object which the law has in view in leaving every one free to dispose of his school taxes according to his own convictions being the removal of a source of religious animosity, all clauses of doubtful meaning should, as far as possible, be construed consistently with the attainment of this end; and the concession, like every other immunity favorable to the maintenance of order and the public peace, should be extended rather than restricted in its application. 4th. The proprietor, although he may not be a resident, is nevertheless a member of the municipal body to which the administration of the common interest belongs. He has without doubt, under the law, a right to be heard and to vote at elections. He is a ratepayer and an elector, and consequently must have the same right as a resident to choose between the two school corporations, that of the majority and that of the minority. 5th. Assuming that the word *inhabitant* is used in the exclusive sense of *resident*, it is intended in the law to confer on residents only the right of forming a dissentient corporation; but this dissentient corporation once formed and established, it cannot have been intended to carry further the distinction between resident and non-resident ratepayers, and thus to deprive the latter of the right of paying their assessments to the corporation representing the religious minority to which they belong.

Judge Sicotte's judgment is as follows:

IN THE SUPERIOR COURT, DISTRICT OF ST. JOHNS.

The School Commissioners of St. Bernard de Lacolle *vs.* Joseph C. Bowman.

In giving judgment in this cause Mr. Justice Sicotte said,—The liberal character of our Legislature in religious matters at all times is a fact which cannot be questioned. By its permanence it has brought about, among the races and the different religions which exist on our soil, sentiments of confidence; a mutual spirit of respect, of good will and charity, confidence and peace. Whenever the law has to be applied in matters relating to religious liberty, this constant state of things, so universal in its tendency, constitutes an important point in the consideration of the question. We have no reason to believe that the Catholic element has retrograded. Everybody understands that the education of youth is of all causes the most energetic, the most active, the most penetrating and the most powerful, which can influence religious ideas, as also the tendencies and habits of every day life. From thence, therefore, arises the just anxieties, the demands of each faith to have the moral and religious superintendence of its fellow-believers. Our Legislature gives each denomination the free control of its own educational matters subject to general law, which provides for civil and political order, the equality of religion and the liberty of conscience. The equality of the different religions by the law, and the absolute right inherent in each citizen to the free exercise of his faith and religion being admitted, the control of educational matters must be recognized as an essential corollary and the logical consequence of these rules of natural right. With a law based on these principles, enacted with the avowed and evident object of giving them complete and due effect, no one can refuse to admit that the way of giving such instruction should be subordinate to the principles of the law. It is proper in this inquiry to take into consideration the true and liberal arguments made during the hearing of the case by the learned advocate for the defence. "There is no doubt," said the Hon. Mr. Laberge, "that the intention of the Legislature was to allow each and every one to lay out his school-rate after and according to his religious opinions." In fact, if the contributor is a resident or not, his religious belief remains unaltered, as well as his desire to protect it, which is founded on similar reasons. What the law intended was the prevention of all causes of irritation; that all classes should live in that confidence which is assured by religious peace; that fanatics should have no cause for agitation, and that no one should be oppressed. The Legislature seemed to understand that if no one desires to be oppressed, it is unfortunately too true that every one wishes to be an oppressor. With a degree of wisdom which cannot be too highly praised, the Legislature aimed at giving religious intolerance no opportunity to establish itself on any occasion under the protection of municipal or civil intolerance. It would be a strange anomaly if a law led to two opposite results when applied to the same person,—that it should not protect the individual in the highest exercise of his liberty, by reason of a principle, but would only do so by reason of an accidental fact, such as his residence, and that the immunities which such law confers should be trampled upon by its own action. It would be a still greater anomaly if an order of things, consecrating the principle of the utmost liberty in education and belief, should, when applied, lead to acts of intolerance and oppression. It is indubitable that the law affirms, without disguise (*sans déguisement*), without obscurity, and in a way as positive as it is clear, the right of the Protestant, as well as the Catholic, to control the use of the funds required for the maintenance of the Common Schools, and to direct by such control the education of their children. This is a personal statute elevated above, by its principles, all subtleties, such as the meaning of words, and should not be limited to any particular place. The wish of the dissentient is the measure of the exercise of his right, and is a franchise which should cover his contribution as well as his person, *in omni loco*: otherwise it would be impotent and illusory. The principle of the law, as to dissentients, is in the diversity of the religions, and not in that of places. * * * * *
Whence, therefore, comes the difficulty, the doubt, in the application of the law? It is pretended that the law is expressed in such a formal manner in the case of non-residents, that the Judge has not to distinguish when the law does not distinguish, and that he cannot seek for an interpretation of the aims or intentions of the legislator, or deduce from principles, when the law contains a positive order and a formal disposition. I will not discuss what is so well understood—that the judicial power cannot intermeddle with legislation. But few cases are susceptible of a decision on the precise text of the facts in litigation. It is from general principles, from doctrine, from the science of law, that we must pronounce in nearly all cases. If the science of the legislator consists in adapting the most favourable principles to the common good, the science of the judge consists in putting these principles into action, and in extending them, by a wise and reasonable application, to circumstances; the role of the judge is to be as liberal and more tolerant than the law (*plus tolérant que la loi*); and his duty should never lead him to place civil intolerance in the power of fanaticism. It principally appertains to judges to show an example of the utmost deference for the sentences and the opinions pronounced by the Courts; and it is by reason of this respect for a judgment in which I cannot acquiesce that I have thought it proper to enter into a more extended examination of the question, by studying the law under all its different aspects, and in analyzing it with impartiality, so as to understand its nature, its aims, its whole, and verify by these means its application to the case. What is important to decide is the security of each person, by putting an end to those grievous situations which, by their doubtfulness, almost sanction ignorance and fanaticism (*qui donnent presque droit à toutes les ignorances, à tous les fanatismes*); to settle their demands by referring to the law as interpreted and applied in the egotistical point of view of each local interest, varied as it is by the accident of Catholic and Protestant majorities. Here is the clause which is cited, asking for a judgment declaring the defendant deprived of the dissentient right which he claims, and which is refused him, on the ground that he does not reside in the municipality of the plaintiffs.

"When in any municipality, the regulations and arrangements made by the School Commissioners for the conduct of any school, are not agreeable to any number whatever of the inhabitants professing a religious faith different from that of the majority of the inhabitants of such municipality, the inhabitants so dissentient may collectively signify such dissent, in writing, to the Chairman of the Commissioners, and give in the names of three Trustees, chosen by them for the purpose of this Act."

Is this text so precise and so clear that its perusal alone leads to the understanding that it desired to exclude non-resident proprietors from the advantages and rights of dissentients? To understand these questions of language and signification, it may suffice to recall the two contradictory judgments which have been cited and the declaratory law submitted by government in 1863, with the assent of the Department of Education, and the opposition, offered on all points, to this interpretation, which manifested itself in judicial proceedings. When the terms of an act appear to conflict with its aim, its whole, the general spirit of legislation, the tendencies of society as well as its habits, it should not be admitted in an hostile sense to the object of the law and the opinions of all, unless the intention of the legislator is evident by the expressions which he has used, unless the order is formal and leaves the Judge no course but to apply the law. There is certainly no such precision, no such expressions, no such order in the enactment on which judgment is demanded by the plaintiffs. The expression "the inhabitants" does not in parliamentary, legal or vulgar language, imply in absolute and necessary sense, residence. It is generally used to desig-

nate proprietors. In the English Statutes and the commentaries it means the rate-payer. The Poor Law says " overseers shall raise by taxation, of every inhabitant, and of every occupier of lands and houses in the parish." Burns in his commentaries says, " The taxation ought to be made upon the inhabitants and occupiers of lands within the parish, according to the visible estates and possessions they have within the parish." Blackstone, treating upon the same subject, thus expresses himself: "The overseers are empowered to make and levy rates upon the several inhabitants." The Statute relating to the maintenance of roads contains the following terms: "An assessment upon all the inhabitants, owners and occupiers of land, reteable to the poor, shall be made." In these two cases the rate is imposed upon persons possessing goods subject to taxation, whether they reside or not in the place. Nevertheless, the Statute designates the rate-payers by the appellation "inhabitants." Burns shows us how these words were interpreted : " Abundance of orders have been quashed, for not setting forth that the persons (who by the Statute must reside 'in the parish'), were substantial householders, and describing them only as principal inhabitants and substantial householders, without adding 'in the parish.' " This surely shows, according to these judges, that the words "the inhabitants or householders" did not essentially imply residence. Philips, in his excellent work on evidence, speaking of the changes brought about by the operation of Lord Denman's Act, thus expresses himself: " Rated inhabitants were before that Act incompetent witnesses." This incompetency applied to all rate-payers, whether they resided or not in the parish. Therefore, according to the Parliamentary language of England, the words " the inhabitants" referred to a rateable property, a rateable and a rated inhabitant, without regard to residence. The edict of 1679, which regulated in Lower Canada the obligations of parishioners with respect to the erection of churches, ordered that they should be built at the expense of the inhabitants. Several ordinances have been published, and several judgments have been delivered since 1790, in which the proprietors in a parish, residents or not, are condemned to contribute for the construction of the churches, and are called " the inhabitants." In the Municipal Law of 1841, the electors are designated in the English text " the inhabitant householders," which has been translated " *les habitants tenant feu et lieu.*" The statute of 1845, which reformed the District Councils by Municipal parishes, in designating the electors indicates them as follows : " the said inhabitants being inhabitants *tenant feu et lieu.*" In Upper Canada the statute gives the right of voting at the first election in a municipality "to every resident male inhabitant or sufficient property," and at subsequent elections " to every male freeholder" whose name appears on the assessment roll. It would be useless to cite any further texts to show that the words "the inhabitants" have not in our Parliamentary language an absolute sense of residence ; otherwise the Legislature would never have said, as we have seen, " the said inhabitants being inhabitants *tenant feu et lieu.*" These words indicate the universality of the interested parties constituting the municipality with and by its proprietors. In a community, calculations are only based on its taxable value. The assessment roll is the sole legal record in which you may read and learn the names of the inabitants. In the works of the best authors the words "inhabitants" or "proprietors" are indifferently held to qualify or designate the interested parties in referring to the properties which they possess. Denisart tells us that " When the inhabitants of a parish are at law in matters of real estate, they comprise the proprietors of lands situated in the parish in such a way that although these proprietors reside elsewhere, they are on such occasions held to form part of the number of the inhabitants." Curasson, in his treatise on possessory actions, expresses himself as follows : " The inhabitants have a right to enjoy all the advantages and conveniences which are bestowed by a street" ; and then, refuting Pardessus, adds, " He allows that the proprietor should be indemnified if deprived by the municipality." In a Judgment which he quotes, allowing damages for a change in the grade of a street, we find the motive in the following terms : " Seeing that among the charges which each inhabitant has to meet, the damages which a citizen's property may receive cannot be enumerated." So much for the Parliamentary and legal sense of the words. The dictionary says a " rich inhabitant" applies to people generally, and that a well-to-do " inhabitant " indicates a proprietor in easy circumstances, or wealthy farmer ; without any reserve as to his special residence. But the Statute even in this case interprets the words in the sense which they should carry. The 34th clause orders that there shall be a meeting of the proprietors of land and of inhabitants *tenant feu et lieu*— " landholders and householders"— for the purpose of electing Commissioners. To be an elector a person must be a proprietor in the municipality. Residence is not necessary in a municipal election to give the right of voting ; it is not required either for the political vote, and it is, doubtless, by reason of the universality of interest which relates to public education, that both franchises have been placed on the same footing. The proprietor, although he does not reside, forms part of the municipal body to which appertains the administration of the common interest. He is by the law itself held to form part of the number of inhabitants. He has the right to be notified, and of action in the organization of the Executive Council of the community. Thence flows his immunities, which are those of the other rate-payers ; he cannot form part of the body politic and still only possess the right of paying. It is by reason of his contribution that he forms part of the community, and the least that he can possess is the right to control its use and destination. It is no longer a local, partial and exclusive right, but a public and general one, interesting all society in the same degree. When local improvements of a material nature are in question, this contribution can be laid out in what the majority may deem to be the most advantageous way ; for then the non-resident proprietor participates in the improvement. But we cannot reason in this way when conscience is in question, and things relating to morals and religion. There is no longer any confusion between a thing belonging to all and to each, but nothing is settled or determined by the principle of majorities ; in a religious point of view a person owns himself entirely ; otherwise it is but liberty of thought and education, exercised at the will of the majority. In these divergences of opinion, more or less egotistical, people seem to have lost sight of the object which Parliament had in view by the terms in question. In order that there should be a corporation of dissentients in a municipality, it follows that there should be in a municipality itself a number of inhabitants to organize and carry out the functions of such a corporation. But once such a body is constituted, the law makes no further distinction ; it declares that the council of dissentients will have the sole right to assess and levy the school rates from the dissentients. Religious faith alone limits and designates those who may belong to such corporation ; in fact, it is but logical and impartial that a separation of the majority and minority should take place on the simple demand of the latter. Ere resuming this argument, I believe it my duty to say that if any person does not concur in the opinions which I have just enunciated, they cannot, nevertheless, deny that the language of the law, as to the conditions of the right of dissidence, is at least susceptible of the interpretation which I have given it. This admitted, we revert to the science of law. The general rules which the wisdom of enlightened men of all ages have taught us for the explanation of laws should be studied, in order to guide the opinions of judges. As Dwarris remarks : " The duty of the judges in the interpretation of the law, if difficulties occur, is to look to the spirit and object, and to be guided by rules and examples." Several of these rules have already been elucidated ; it will suffice to recall and apply a few others. " It is not the words of the law," says ancient Plowden, " but the eternal sense of it, that makes the law. The letter of the law is the body, the sense and reason of the law is the soul." It is worthy of remark that our legislature, in material points, transcribed these words almost literally by enacting that generally all words, expressions and dispositions should receive as large, as liberal, as broad, and as advantageous an interpretation as was necessary, in order to reach the objects contemplated by its acts, and to put in force all its different provisions, according to its true sense, intent and meaning. In form the intention of the legislature is not doubtful ; it is even admitted in a sense favorable to the dissidence of the non-resident. And here is how the judicious Dwarris resumes the teaching and the jurisprudence of England : " The real intention, when collected with certainty, will always, in statutes, prevail over the literal sense of the terms. A thing which is within the object, spirit and meaning of a statute is as much within the statute as if it were within the letter." The dissidence of the Catholic or Protestant non-resident "is within the object, spirit and meaning of the statute." A jurisconsult, whose opinions should have the greatest weight, but principally in the study of the rules which should be followed in the interpretation of the laws,—the learned Domat,—taught that it was by the spirit and intent of the laws that they should be heard and applied. To judge properly of the sense of a law we should, he said, consider what is its motive, what were its inconveniences and its utility. Thence it followed that if some of the terms or some of the expressions of a law appeared to have a different meaning from those which were evidently fixed by the tenor of the law in its entirety, we should seize these latter and reject the others which were in the terms, but contrary to the true intention of the law. With the liberty of creeds and their equality before the law, the rights of the minority are as absolute as those of the majority. The true intent of the law seems to be the equal protection of these rights ; the other sense the law is capable of must be rejected wherever it seems contrary to its real object, although it is evidently couched in much the same terms. An important observation on this part of the subject would be omitt d if we did not recall what was so often shown by the most eminent magistrates of France and England. When it is proposed to set aside the principles of eternal justice or to elude fundamental rules, the law expressing the intention of the legislator must be expressed with irresistible clearness to induce

the tribunals to suppose that he really has the intention to effect such a result. The present organization was established for the purpose of guaranteeing the Catholics as well as the Protestants from the fear and possibility of seeing their contributions employed in propagating doctrines which they hold in repugnance. The law would destroy the law if by its application under any circumstance whatever it did away with this guarantee. The reasons of inconvenience urged by the plaintiffs in support of their pretensions cannot be supported, inasmuch as their system does not provide any remedy, can only tend to hinder public education and would inaugurate every where the provocative policy which the Legislature has endeavoured to prevent. It would be as just in Canada as it is in England, to say with Baron Parke, "We must always construe an act so as to suppress the mischief and advance the remedy according to the true intent of the makers of the law."

The examination which I have made into this subject, leads me to believe that it is demonstrable to evidence that the right of the rate-payer to superintend the employment of his rate in public education is the corollary of his right to the exercise of his religion and of his faith; and that the law examined as to its object in its whole, and in its details, has consecrated so just and necessary a principle to peace, in a country where races find shelter in their contrast, and religions protect one another by their diversities.

It also seems to be demonstrated that a strictly legal interpretation of the text of the law, followed in its Parliamentary as well as in its usual and legal sense, cannot allow or admit an exception to this right, which flows from our civil and political constitution as well as from the natural law.

Extracts from the Reports of the School Inspectors for 1861 and 1862.

(Continued.)

COUNTY OF HUNTINGDON, PART OF THE COUNTIES OF CHATEAUGUAY AND ARGENTEUIL, AND THE PROTESTANT POPULATION OF THE CITY OF MONTREAL.

(First Report concluded.)

10. *Hemmingford.*—Of the schools of Hemmingford, more are in a satisfactory state than usual. The school-houses of Nos. 9 and 12 were burnt some time ago; since then, these districts have had no school.

Of the three dissentient schools in the municipality, only one has a teacher. It is not in a very satisfactory state, and is very ill-supplied with desks and benches. It would have been much better for the people of this district to have remained under the commissioners.

11. *St. Andrew's.*—At the time of my visit to St. Andrew's, seven of its schools were in operation, viz.: 3 dissentient schools and 4 schools under commissioners. All were in their usual state of efficiency. The children who showed most improvement under examination, were those attending the English academy, and schools Nos. 6 and 13, under commissioners.

In the French academy similar efforts are made by the teachers, but with rather less success, owing especially to the very irregular attendance of the scholars, and the very short time that the school remains under the conduct of the same staff of teachers.

12. *La Chute.*—It is pleasant and very encouraging to have to report favorably of all the schools of a municipality. Improvement in methods of teaching are observable in all the schools of La Chute. The college is well conducted. After spending two days in examining its departments, the collected results of my examination are altogether favorable.

Generally, the people of La Chute show of late much zeal in their efforts to advance education in their parish.

13. *Gore and Wentworth.*—Of seven schools in these municipalities, only 3 were in operation last winter, at the time of my visit. For two in the Gore, efficient teachers could not be obtained. With the Wentworth people the school commissioners have had for some time considerable trouble; nor had they got over it. The trouble was caused by a few discontented selfish persons, of little education, with purblind views of education, who thought to have everything their own way in school matters, and they have so far succeeded, that Wentworth has had neither of its two schools in operation for two years.

14. *Chatham*, No. 1.—I have not really to report unfavorably of any of the schools. The best conducted, and where the children, from the results collected at their examinations, showed most improvement, are those of Nos. 2, 5, and 6.

15. *Chatham*, No. 2.—This division has five districts. At the time of my visit two of their districts had no school. The three schools in operation were in a pretty satisfactory state. So often are schools here brought under the control of new teachers, that the children, though brought into a very favorable state of mind for training, and making favorable advances in their education at one time, are in danger of coming under others less capable of teaching them, or it may be, who will retard instead of advance their education. I have faith in the school commissioners of this section of the township. I believe them to be men earnest in the advancement of education.

16. *Grenville.*—The opposers to the school law in this township are as much disposed as ever not to submit to it. They would rather put up with such schools as they have been able to keep, or have no schools, than to come under any law compelling them to support and keep schools in operation for the benefit of their children. For resisting the law their motives are various; but whatever these be, their youth continue to grow up without education, or with very little deserving the name.

17. *Harrington.*—All that I have said respecting Grenville applies equally to Harrington.

CITY OF MONTREAL.

The two schools under my inspection in Montreal continue to flourish. Mr. Arnold's model school deserves special notice. Its numbers, since the first year I inspected it, have tripled; and in efficiency, I observe every year a favorable difference.

Of Mr. Robertson's school, I would state further, that if an addition were made to his school-room as a distinct department for girls, to be conducted by a female teacher, and Mr. Robertson's salary so much increased as to enable him to employ a few paid pupil-teachers, his school would greatly increase, and become more deserving of public support.

Second Report.

In this report Mr. Bruce describes the obstacles to the working of the school law and the progress of the schools in about the same terms as he used in his previous reports. He mentions at the same time that the number of ill-kept schools is decreasing, and that at the present time there is not one which has not at least done some good.

Mr. Bruce then makes the following remarks on the subject of the matter taught in the schools in his district:

Reading.—The elementary lessons in reading are, in many schools, now taught more rationally than formerly, and children pass through the elementary stage much quicker and with far more knowledge of what they read. Still farther improvements are required, and must be aimed at. The methods of teaching the more advanced classes is greatly reformed. A large proportion of the children in the more advanced classes, in many schools, read with considerable fluency and expression. Orthography is generally taught by the slate—a great improvement.

Writing.—The proportion of children, in nearly every school under my supervision, taught writing is much greater than formerly; and the improvement in quality is, perhaps, more than the improvement in quantity.

Arithmetic.—The improvement in teaching arithmetic is very marked compared with former years. A very large proportion of the children now work elementary rules with ease, accuracy and expedition. And teaching pupils the application of the different rules to business is now more attended to.

Geography.—In only eight schools is geography not now taught. Why it is not taught in these is, that parents will not purchase geographies, nor will commissioners buy wall-maps, &c.

Grammar.—In four or five schools only is grammar not taught; the fault is that of parents, who will not purchase grammars for their children, considering grammar a useless study. Grammar, which requires more thought in the children and skill and knowledge in the teacher, is still in a state which indicates a deficiency in knowledge, tact, or industry on the part of too many teachers. The grammars used are scarcely up to our improved methods of teaching it.

Composition.—Composition is taught in about 80 schools, and in a considerable number of these very successfully. I cannot remember that it was taught in any school when school inspection first commenced.

Vocal Music.—It is to be much regretted that so very little attention is paid to singing in our schools. In only a very few within my field is singing practised. Every teacher should be required to give

instructions in music; it should be considered an indispensable branch of instruction.

Drawing.—This is another branch too much neglected. Writing and drawing should be taught contemporaneously; where this is the case, the art of writing is acquired much sooner and with more ease.

1. *Elgin.*—The schools of this municipality all had teachers, and were in operation at the dates of my visits, except the school of No. 3, which happened to have holidays. In this report I have to complain of no school as being in an unsatisfactory state. One school (No. 2) had a very small attendance. I wish commissioners would take a more active part in collecting school dues.

2. *Dundee.*—I found two schools vacant at this visit to the township, namely, No. 2 and the dissentient school; both these have not been kept regularly in operation for some time. The dissentient school can never do much good; it and No. 7 should be united; their union would make a strong district, and commissioners would be able to keep its school regularly in operation conducted by an efficient teacher.

Of the schools in operation, Nos. 1, 4, 7 and 8 showed considerable improvement; No. 1 the most. The children of No. 5 showed very little advancement.

The school commissioners shew considerable zeal in discharging their duties, and their Secretary-Treasurer deserves praise for his part of the work.

3. *St. Anicet.* — This parish cannot yet boast of many efficient schools. So frequently are teachers changed, and schools are thus brought under new discipline and children under new methods of teaching, that our difficulties in improving them can hardly be overcome. The people desire to have their own way in choosing instructors and change them as they wish. Commissioners and trustees generally yield to their desires and wishes, and thus in mending matters, as they think, things go from bad to worse. We have remonstrated against this evil, but, as yet, in the majority of municipalities, to little purpose.

The best conducted schools, and in which children show the most advancement, are No. 12, under commissioners, and Nos. 3 and 4, under trustees; next there are No. 1, under trustees, and Nos. 3 and 4 under commissioners; the rest are in a very tolerable state.

I may further remark that there is no want of desire with either the people or the commissioners and trustees to have good teaching and good teachers. Their notions about teaching, sound education, of principles, and ignorance of how schools should be conducted, are the great drawbacks.

4. *Godmanchester.*—The state of schools in Godmanchester, this year, varies not a little; some are conducted with considerable zeal, efficiency and success. No. 8, under the commissioners, gives the least satisfaction.

5. *Hinchinbrooke.*—In this report I have to speak favourably of nearly all the schools of this municipality. A reformation is gradually working less or more into them all, except the dissentient school. So often is this school without a teacher, so inferior are the teachers the trustees generally engage, and so short is the term of engagement, that the difficulties which these create are too formidable to be easily and in a short time overcome. The present teacher, however, should she be continued for some time, may do not a little to revive it.

The school commissioners of this township discharge their duties with not a little zeal, and their Secretary-Treasurer is likewise very attentive to his work.

6. *Franklin.*—Of the schools in operation all are in a fair state of advancement. The least improvement I observed was in writing and grammar.

I have to speak favorably of the Secretary-Treasurer of the Board of Commissioners. His books are kept with much correctness, and everything recorded and entered with care.

7. *Huntingdon.*—The schools of this village are all in operation. The advancement of education since my first visits to their schools is most satisfactory.

The dissentient school is in a fair state, considering the difficulties with which the teacher has to contend. The greatest are the irregular attendance of the scholars and want of books and other school apparatus.

8. *St. Malachie.*—I have to report, and with much pleasure, of the very satisfactory state of the schools of this municipality. In my visits I was accompanied by one or more of the school commissioners, and in not a few schools some parents attended.

The commissioners are generally very attentive to their duties. They have a very efficient Secretary-Treasurer. Books well kept.

9. *St. Jean Chrysostôme*, No. 1.—Visited together two schools in this division, and found them pretty well conducted. The teachers of both are diligent, and not unsuccessful in advancing the children. The journals of the schools showed some increase of pupils.

The dissentient school of this part of the parish was not open at the time.

The school affairs of this division of the parish are at present in a much better condition than formerly, and the murmuring objections to the school law and property assessment are no more heard of.

Last year their finances were in rather a confused and unsatisfactory state. The difficulties then existing are now nearly got over. It is unfortunate that they are still in arrears with their teachers.

10. *St. Jean Chrysostôme*, No. 2.—I visited the mixed schools in this division of the parish, in company with Mr. Inspector Grondin. There are No. 8 and 14, both of which are in a favorable state of improvement. Schools Nos. 1, 11 and 13 are Protestant, and were visited by myself only. They are in a very satisfactory state, Nos. 1 and 11 especially.

11. *Hemmingford.*—In some municipalities education advances far less than in others; the same is the case in different districts. This applies to Hemmingford. Compared with some other municipalities, it lags behind; comparing some of its own districts with others, there is a marked difference.

12. *La Chute.*—At present all the schools in operation are in a satisfactory state. The quality of the instruction given is now much better.

The present Board of Commissioners, also, pay considerable attention to their duties. For their assiduity and zeal they deserve praise.

The college is, likewise, in a favorable condition, and is well worthy of public support; nor are its directors unmindful of their duties.

13. *Gore and Wentworth.*—I have repeatedly directed attention to the poverty of the Gore and Wentworth, and therefore the difficulty of keeping schools regularly in operation. The education which the children of these municipalities are receiving is, in consequence, meagre and imperfect. In not one of their schools, with the exception of No. 1, do I find the children advancing to my satisfaction.

I anticipate not a little help to rise the character of their schools, and keep them more regularly in operation, from the present chairman of the Board, the Rev. Mr. Griffin.

14. *Chatham*, No. 1.—This is another municipality favored with earnest, zealous, and watchful commissioners, who spend not a little of their time in attending to their school affairs. In engaging teachers they are frequently disappointed, depending more on diplomas for professional skill and scholarship than on that true test of qualification—previous success in conducting schools. This year their teachers, with one or two exceptions, are persons of fair qualifications, and in teaching, pretty successful. They all complain of that general hindrance to successful results in teaching, viz: irregular and unpunctual attendance.

15. *Chatham*, No. 2.—It is of great advantage to schools when school commissioners and inspectors work together, and the suggestions and recommendations of the latter are followed up. I single out this municipality as one such. It has been but a short time a distinct municipality for school purposes, yet they have built two new schoolhouses, one of which is the best in the township of Chatham; and their schools are in as good a condition as I could expect. Their Secretary-Treasurer is also very efficient, and otherwise of value to the Board.

16. *St. Andrew's.*—All the schools in this municipality have been kept regularly in operation during last year, except those of Nos. 11, 12 and 14. The academy is in its usual state of efficiency. The English academy is kept very regularly in operation and deserves public support.

Both the commissioners and their Secretary-Treasurer discharge their respective duties very satisfactorily. The trustees of the dissentient schools and their Secretary-Treasurer show considerable skill in attending to their duties.

17. *Grenville and Harrington.*—The people in this section of my field of inspection, who object to come under the School Act, are still triumphant.

CITY OF MONTREAL.

The schools under my supervision in the City of Montreal are in their usual very satisfactory state, and the number of children attending is steadily increasing. The greatest increase is in Mr. Arnold's model school. This school continues to be conducted in a very efficient manner; the most remarkable skill and success appear in his method of teaching arithmetic.

Extract from the Report of Mr. Inspector Valade.

COUNTIES OF JACQUES CARTIER, HOCHELAGA, VAUDREUIL AND SOULANGES, AND THE CATHOLIC POPULATION OF THE CITY OF MONTREAL.

As I have always done, I consider it to be my duty, instead of suggesting new theories, to watch and see that your recommendations are put into execution, and I have endeavored by every means in my power to place the schools in a position to meet the requirements of society, to the honor and profit of which they are destined to redound. I have also applied myself to the careful examination of the accounts of each Secretary, the liabilities, and the collection of the rates, and I have taken measures to assure myself of the regular payment of the teachers. I must here remark that I have to congratulate myself on the ability exhibited by a great number of the Secretary-Treasurers in the performance of their duty, a condition which all acknowledge to be the mainspring of the school system.

So great is the interest which the parents take in the success of the schools, that when they are informed of the day and hour of my visits, they take real pleasure in being present at the examination.

I have always received a cordial welcome from the clergy. Our venerable Curés take the more interest in the schools in consequence of the instruction there imparted being based upon religious principles.

As to the teacher, that privileged individual, that lay apostle, I have generally found him at his post, full of devotion to the cause which ensures him the esteem, respect and confidence of the parents of his pupils.

I must not neglect to make honorable mention of some teachers in my district who have been educated at the Normal Schools; they are distinguished for their abilities and good morals. Sobriety, vigilance and love of study characterise most of them.

I have nothing but praise to bestow upon our religious educational institutions, in which order and perfect discipline are maintained.

If I have alluded to the acknowledged merit of the male teachers, I must certainly not forget the eminent services rendered by teachers of the opposite sex in their respective sections.

In most of the schools I was particularly struck by the progress which had been made in two branches of instruction: writing from dictation and mental arithmetic; nor are the epistolary art, composition and declamation neglected.

I subjoin a review of each school under my superintendence.

(*To be continued.*)

Notices of Books and Recent Publications.

Buchon.—*Jules Marcou, par Max. Buchon.*—Billet, Publisher; Salins (Jura): 1865.—24 pp. 18mo.

A short biography containing an account of the scientific researches of M. Jules Marcou, the well known author and geologist. M. Marcou spent several years at Harvard College, near Boston, and while in North America, explored the continent in all directions, and published many valuable works. In writing the present sketch of his life and labors, M. Buchon has performed a patriotic task, the object in view being to place prominently before the eyes of the public in Europe the success of a friend and countryman.

McGee.—Speeches and Addresses chiefly on the subject of British American Union. By the Hon. Thomas D'Arcy McGee. Chapman and Hall, Publishers; London: 1865.—308 pp. 8vo.

The popularity of Mr. McGee, as a speaker, is so widely spread that his name is, in itself, a sufficient guarantee for the favorable reception of any collection of oratorical efforts to which it may be appended. The speeches and addresses will be read with interest and pleasure by persons of all shades in politics for the eloquence and learning displayed by their author, if for no other reason. The subject, besides, is completely exhausted in these pages—at least on that side of the question which the gifted speaker has espoused.

Baillargeon.—*Le Nouveau Testament de Notre Seigneur Jésus-Christ, traduit de la Vulgate en français. avec des notes explicatives, morales et dogmatiques; Par Mgr. Charles François Baillargeon, Evêque de Tloa, administrateur de l'archidiocèse de Québec.*—Brousseau, Printer; Quebec: 1865.—xiv-817 pp. 8vo.

The translation of the Vulgate, of which we have here a remodelled edition, was undertaken at the instance of Mgr. Signay, when the author was still *curé* of Quebec, and published for the first time about the year 1846. In the former edition, besides numerous foot notes added by the translator, the commentaries of Père de Carrières had been interwoven with the text—an arrangement that proved embarrassing and defective. In expunging the commentaries from the text for the present edition, it was found that many portions of the narrative, as translated, would require to be altered in consequence of the intended change, or because His Lordship believed they were susceptible of a more literal rendering, and the greatest part of the text has been retranslated accordingly. The work is enriched besides by the addition of notes to the 1600 contained in the first edition. The typographical part of the work leaves nothing to be desired and reflects much credit on the publisher.

L'Echo de la France.—*Revue étrangère de science et de littérature, numéro spécimen.*—30 pp. 8vo., double columns, Louis Ricard, Editor and Proprietor. Longmoore & Co., Printers; Montreal.

As the title implies, this periodical will be devoted to the reproduction of articles selected from the French reviews. It will be issued once a week, and, under the management of Mr. Ricard, promises to be highly successful. We would suggest that in addition to the name of the author, the title of the publication from which each article is drawn should be also given. The price of subscription will be $4 per annum.

Souvenirs *du 4 novembre* 1864, *dédiés aux anciens élèves du Séminaire de Ste. Thérèse.* Eusèbe Senécal, Publisher, Montreal; 38 pp. 8vo.

The contents of this pamphlet are, 1st, an account of the inauguration of a monument erected to the memory of the founder of the college at Ste. Thérèse, the late Rev. Mr. Ducharme; 2nd, a sketch of his life and, 3rd, an essay treating of his capabilities as a speaker; the whole being ornamented with a portrait and a view of the college. We have said before that these little publications are calculated to do much good by promoting the interest felt by former pupils for the place that witnessed their first attempts to win literary honors, and by diffusing a knowledge of our institutions of learning throughout the country.

MONTHLY SUMMARY.

EDUCATIONAL INTELLIGENCE.

— The boys of the High School, before separating for the Christmas holidays, gave an entertainment at the school to their friends and friends of the school. Yesterday afternoon a very respectable and numerous audience gathered in the large hall of the school, when the following programme of recitations was gone through:—

First came an admirable Prologue written by Geo. Murray, Esq., recited by Smith.

Ladies and Gentlemen, I make my bow,
With trembling diffidence, before you now;
But still not *speechless*, for methinks I trace
Kind looks, warm sympathy in every face.

I'm not exactly, if the truth be told,
A veteran actor—I am eight years old—
And who can hope artistic skill to reach
By seven years' practice of the gift of speech?
Boldly I say it, we have one and all
Toiled not to bring discredit on this Hall:
Throughout our Programme we have sought to " steer "
" From grave to gay, from lively to severe,"
And, should we fail, we humbly still profess
That we at least have merited success.

True, we have nought on which we can rely
To charm the taste or fascinate the eye,
No painted miracles of scenic art,
No costumes faithful to each actor's part,
No gilt, no spangles, nought in fact beyond
This one-stage property of Shylock's bond.

For this day only, Shylock will be seen
Without his far-famed " Jewish gabardine ; "
Smeared with no soot to simulate his breed,
The " noble Moor " will eloquently plead,
And Buzfuz thunder with indignant frown,
Docked of his wig and destitute of gown!

Forgive these flaws: and if our *mise en scène*
Be deemed too simple, to severely plain,
Recall the tale of antique ages, how
When men and women laughed and wept as now,
Thespis, the Sire of histrionic art,
Displayed his *troupe* of actors in—a cart.

One word, kind Sirs, pray pardon us the crime
Of being young—'t will soften down with time;
And you, fair Ladies, o'er our efforts fling
Your smiles' bright sunshine—for, as poets sing,
Without the smile from partial beauty won,
Oh! what were man (or boy)—the world without a sun!

The remainder of the programme was as follows:

2. The Idiot Boy—Matthews.
3. Othello's Defence before the Venetian Senate—Macduff.
4. The Duel—Baylis.
5. Scene from "The Merchant of Venice,"—Shylock, Childs; Antonio, Reid; Bassanio, Empey.
6. The Charge of the Light Brigade—Michaels.
7. Sergeant Buzfuz address to the Jury—Baynes.
8. Trial Scene from "The Merchant of Venice"—Shylock, Baynes; Antonio, Mulholland; Bassanio, Macdougal; Gratiano, Fleet; The Duke, Jones; The Doctor of Laws, Cross.

The whole of the recitations were very excellent, most creditable to the lads themselves and to their Elocution Master, Professor Andrew. We never remember to have heard such excellent school recitations. Baynes was particularly clever in Sergeant Buzfuz and Shylock—the trial scene being all done *à merveille*, and Michaels recited "The Charge of the Light Brigade" with wonderful spirit, feeling and good taste.

The elocutionary exercises having concluded, the audience adjourned to the gymnasium, in order to witness the performances of Mr. Barnjum's pupils. First in order came the Junior Class, who, with wooden dumb-bells, executed a variety of most graceful and spirited movements, and anything more admirably adapted for the use of children than these exercises, we cannot conceive. Next came a class of older boys with Indian clubs. This beautiful exercise is doubtless familiar to many of our readers, who witnessed it at the late entertainment given at the Rink, on which occasion it was the theme of universal admiration. Next followed the parallel bars, on which the boys showed to very great advantage the elasticity and ease of their movements, speaking volumes for the admirable training which they had received. Mr. Barnjum evidently believes that *nerve* as well as *muscle* should be cultivated, and the dashing in which the young gymnasts threw sommersaults in every variety on the bars showed that he had found apt pupils, but still an attentive observer could notice that the *confident* way in which the feats were performed resulted in no small measure from the consciousness of possessing the necessary muscle, for no boy is allowed to perform any advanced feat, until he has proved his subtility to execute all the simple feats *perfectly*. After the parallel bars came the horizontal bar, and here the feats performed were such as to call forth enthusiatic applause, and it was only the confidence inspired by knowing that their careful instructor would allow them to do nothing which they were not fully capable of, that could have reconciled many parents to see their sons apparently determining in the most deliberate manner to break their necks; but there was no occasion for fear, as so strong and pliant have the boys' limbs become by practice, and so well can they balance their bodies, that a severe fall seemed to be an impossibility. After the Horizontal Bar came the Trapeze and Side Rings; on the former several excellent feats were performed, and the latter demonstrated with what perfect comfort one can progress by an alternate hold of the arms, when those arms have been *educated* to the required standard. Next came the inclined ladders, up which the boys climbed hand over hand without the aid of feet, and ran up and down without any assistance from the hand, a feat which, although it looks easy, in reality demands a great command of nerve, and no small practice. After a few more feats, the exercises terminated, and the audience dispersed, evidently much gratified by what they had witnessed.—*Montreal Gazette*.

— The several schools under the control of the Protestant Board of School Commissioners of Montreal held their Christmas examinations. At the British and Canadian School and the Griffintown School, the examinations were presided over by Wm. Lunn, Esquire, Chairman of the Board, and books were distributed as rewards. The pupils are numerous in both schools and appear to have made considerable progress during the course of the year. The British and Canadian School is now under the management of Mr. Allan, formerly of the Quebec suburb Model School, and the Griffintown School is conducted by Mr. Williamson. At the Quebec suburb Model School, Panet street, the examinations were presided over by the Hon. the Superintendent of Education; Rev. Dr. Taylor, Hon. James Ferrier, Wm. Lunn, Esquire, and Professor Hicks, being among those present. After presenting the prizes to the pupils, the Superintendent addressed those present, and was followed by Mr. Ferrier and Mr. Lunn. The school is conducted by Mr. and Miss Maxwell with several assistants. The pupils gave evidence of sufficient proficiency in the several branches of tuition.

— We had the pleasure of visiting the Deaf and Dumb Institution at Coteau St. Louis on Saturday last, when the whole of the pupils, 35 in number, were mustered to receive a lesson in writing from Professor Long. We should premise that M. Magnan, one of the preceptors, has himself been studying under the Professor, with the purpose of being better able to instruct his pupils in the art of writing, and so enable them, as book-keepers or accountants, to earn an honest living. The Principal of the Institution, Mr. Belanger, was present, and three other Priests. The boys, who in age varied from 8 to 20, were put through a great many exercises on the black board; the explanations of Professor Long being interpreted to them by their tutors. The boys seemed to enjoy their drill very much; and it was surprising with what aptitude they imitated the curves and straight lines which the Professor put before them. At the conclusion of the hour's exercise, they thanked Prof. Long for his visit, which he promised to repeat after the Holidays. This highly benevolent institution is under the auspices of His Lordship the Bishop of Montreal, and the Seminary of St. Sulpice, protected by the Provincial Government, and directed by the Clerks Regular of St. Viator. English as well as French is taught. The course of studies is of six years, and comprises grammar, history, geography, arithmetic, book-keeping, drawing and catechism, with some notions on agriculture and domestic economy. The charges for board and tuition are very low, and the unfortunates who have had to seek for education there look very comfortable and happy. They seem to be deeply attached to their teachers, and were delighted when any one of them smiled upon Professor Long's appreciation of their efforts. The charge for board and tuition is very low, and there is no characteristic dress—only the pupils must be provided with clothes, that they may be always kept clean.—*Transcript*.

SCIENTIFIC INTELLIGENCE.

— The usual monthly meeting of the Montreal Natural History Society was held in their lecture-room on the evening of the 18th Dec.—Dr. Smallwood, the President, in the chair.

The meeting was well attended. Among the members present were the Lord Bishop and Metropolitan, Principal Dawson, Dr. De Sola, Dr. Wilkes, Dr. Philip Carpenter, and others.

A paper on "Sanguinaria Canadensis" or Blood Root, by Dr. Gibb of London, England, was then read.

In January, 1860, I had the honour to read before the Medical Society of London a lengthy paper upon the natural history, properties, and medical uses of the Sanguinaria Canadensis with the chief object of making the medical profession in Britain acquainted with a plant which I had employed for some years with decided advantage in many affections of the chest and wind-pipe. My observations were the result of many years' study of the plant in Canada, where I had made myself familiar with everything concerning its growth and natural history.

As far as traditional evidence can be traced, this plant has been used for some time by the Indian tribes of North America as a pigment and a medicine, and also as a dyeing agent. Charlevoix appears to have been the first writer who mentions the purpose for which it was employed when using the expression: "S'est souvent servi de la racine de cette plante pour provoquer les mois;" or, in other words, it was administered as an emmenagogue.

The first printed notice of the plant is briefly given in the Historia Canadensium Plantarum, by Jac Cornuti, Doctor of Medicine, published in 1635. The second notice was by John Parkinson, apothecary, London, 1640. It cannot be inferred from Parkinson's writings that the plant was cultivated in England, although seeds of the plant had been sent from Canada and Virginia, which had propagated abundantly in a garden near London.

The plants described by Charlevoix in 1744, which he met in Canada in 1721 and 1722, are considered in the first volume of the Literary and Historical Society of Quebec by Mr. Wm. Sheppard.

The Sanguinaria cannot be considered a handsome, showy plant; nevertheless, its humble but beautiful little white flower, and the extreme delicacy of its leaves curiously veined on the under side with a pale orange, almost at once strikes the observer; with justice it may be called elegant, and can be admired not only for its delicacy, but is interesting from the circumstance of its very early inflorescence, being among the earliest of the Spring plants of North America, appearing as soon as the frost leaves the earth in the month of April or May.

The flower resembles the White Crocus very closely, for when it first comes up the bud is supported by the leaf, and is folded together with it. The flower, however, soon elevates itself above its protector, while the leaf, having performed its duty of guardian to the tender bud, expands to the full size. The flowers have generally 8 petals—I have seen them of 10 or 12. They are, therefore, not double; with care and attention a fine double variety might be produced, as there is a great propensity in this plant to multiply its petals.

There are, probably, two varieties of the Sanguinaria, carefully founded upon the difference in the form of the petals. When the flowering has passed about a month the whole plant becomes much increased in size, frequently attaining, by midsummer, to the height of 15 inches, but commonly not exceeding 12. The number of leaves varies from 2 to 5 or 6, and several flower stalks are furnished from a single root. The number of flowers depend upon the number of buds or hybernacula, but usually 3 to 4.

The plant has been successfully grown in various parts of Europe, still it is very little known in Britain, and is not even mentioned in many of the systematic works on Botany

Dr. Wm. P. C. Barton speaks of it in an arid sandy soil near the University of Pennsylvania; whilst Pursh says it delights in fertile soil;

moreover it is found where the soil is positively bad, thus showing it is a hardy perennial. It may be converted into an annual by parting the roots in the Autumn, when it will blossom in the beginning of April, and its seeds will ripen perhaps before June. The Sanguinaria or blood-root possesses several names derived from its leading peculiarities and uses. It was called blood-wort, blood-root, beth-root and sanguinaria, from the circumstance of its fleshy roots pouring forth a bright red or orange juice when broken asunder. This juice was used as a dye and a paint by the Indians to smear their bodies, and hence called Indian paint, Indian Turmeric, Puccoon, Red Puccoon, Red Root, &c.

Canada is essentially the country of the Blood Root, hence its name, especially as it was first discovered in that part of the British Empire. It grows in abundance throughout the woods of Canada, and is found plentifully on the shores of Lake Superior. I believe it will be found as far eastward as Labrador and to the north of the Saskatchewan, on the eastern side of the Rocky Mountains. I have seen it growing in various parts of Canada, at distances the most remote. My friend Dr. Henry G. Wright has seen it at Grosse Isle, and it extends much further eastward. I believe that Pursh found it on the peaty soil of Anticosti. It exists throughout the United States as far as Florida. According to the late Mr. Peter Dease, of Montreal, it is unknown at Hudson's Bay, a fact corroborated by Sir John Richardson. The extreme western range of the plant probably extends to the Oregon Territory and California.

No. 1 Bryanston street, London, England.

A vote of thanks was passed to Dr. Gibb for his valuable paper.

Principal Dawson exhibited a number of specimens of flint implements and fossils from St. Acheul, near Amiens, and made some observations on the mode of their occurrence in the " high level gravel," in the valley of the Somme. He referred to the investigations of Boucher de Perthes and Prestwich, and quoted a portion of the description of the locality by the latter geologist. He stated the following conclusions derived from an examination of the locality and of the specimens, more especially those in the collection of Mr. Prestwich :

1. The implements cannot be considered so much a characteristic of a particular age as of a particular work. They are not spears or arrows, or hatchets, but picks and diggers, adapted for digging in the earth or hollowing wooden canoes. A consideration of the implements of the American stone age renders it in the highest degree improbable that the makers of these tools did not possess also stone arrows, spears, knives, and other implements. The application of the idea of an older and ruder stone age to such implements is gratuitous, and contradicted by American antiquities.

2. There are some reasons to induce the belief that these implements have been used in driving small horizontal adits into the gravel beds of St. Acheul, in search of flints. In this case they may not be of great antiquity, though certainly older than the Roman occupation of Gaul.

3. They may have been deposited with the gravel. In this case they belong historically to a very ancient period, though geologically modern; and at the time when they were deposited the climate of France must have been more severe than at present, its level different, its surface covered with dense forests, inhabited by several great quadrupeds now extinct, and the River Somme must have been much larger than at present, and must have spread its waters over a wide plain, in which the St. Acheul gravel constituted a bank or point, inundated in times of flood, and perhaps too by the aborigines as a place for making canoes.

4. Before either of the two theories above stated can be finally accepted, much more thorough investigations must be made, and also careful topographical surveys of the whole district. In event of the view last mentioned being sustained, the question of absolute time required will still be difficult to determine, since the causes of erosion and deposition in operation at the period in question must have been very dissimilar from those now in action, and other unknown causes, whether sudden or gradual in their operation, must have intervened to produce the present state of the country. In this case, however, there would be a strong probability that the *Rhinoceros tichorhinus* and the Mammoth had continued to exist in Europe down to the period of the implement making.

It is much to be desired that a series of systematic excavations in these gravels, and a geological and topographical survey of the whole basin of the Somme should be undertaken by some scientific body in France or England, as it may require many years to enable individual explorers to obtain the data required to settle the questions that have been raised in connection with these deposits.

A vote of thanks to Dr. Dawson for his valuable paper was passed by the Society,—after which the meeting adjourned.—*Montreal Gazette.*

— At a meeting of the New York Association for the Advancement of Science and Art, in Cooper Institute, October 16th, a deeply interesting paper was read by Mathew Hale Smith, Esq., on the "Evidences of the Hebrew Origin of the North American Indian," which well deserves republishing in full for the benefit of all who are interested in the subject.

The following remarks were made by Mr. J. Disturnell, relating to the present condition of America and the native Indians :

" On the continent of America *man* is found to exist, in different degrees of civilization, from the 75th of north latitude to Tierra del Fuego, 55 south latitude; on the extreme north being found the dwarfed Esquimaux, and on the south the full-grown Patagonian Indians. For three or four hundred years this vast stretch of country, running through 130 degrees of latitude, has been known and peopled mostly by different European nations. Danish America or Greenland, Russian America, and British America, lying on the north, each extend within the Arctic circle.

" The United States, entending from the Atlantic to the Pacific Ocean, has been mainly settled by the Dutch, English, Irish, French, Swedes, Norwegians, Germans, and Africans—there now being only about 400,000 native Indians. Cuba, Mexico, Central America, and most of the South American republics, have been settled by Spaniards and Africans; Brazil by the Portuguese and Africans.

" The whites and the blacks embrace all of the known modern origin of the inhabitants now living on the American continent, estimated at from 55 or 60,000,000 souls. Of the native American copper-colored race there is estimated to be 10 or 15,000,000 living in North and South America, *whose origin is doubtful*, their antiquity running back many hundred years before the discovery of America by Columbus. A late writer says, 'The aboriginals of all America have a striking similarity. From Tierra del Fuego to Labrador they are of a swarthy copper color, with straight hair, small ears, prominent cheek-bones, thick lips, long eye, and gloomy aspect. These are considered as distinct families of the human race, though intermixed in every shade.

" Perhaps the most degraded portion of the North American Indians may be found in California and Oregon, while farther to the north, along the Pacific coast in British America and Russian America, there are to be found a more intelligent people, who are good fisherman, hunters, and carvers in wood, stones, and metals, and that in many respects they assume an Asiatic character in their mode of living and rude drawing and carving of different kinds of ornaments.

" On Queen Charlotte's Island, lying midway between Vancouver's Island and the Sitka Archipelago, the native population, named Skittagets, are described as the best specimens of the Indian race, apt to adopt the customs of civilized life, ingenious and industrious, and naturally white as the inhabitants of the south of Europe ; no doubt partaking of an Asiatic cast of character, although possibly more or less removed from the Hebrew origin. One singular fact that exists in regard to the Indian race in America is that of the slight difference in color when living in the Arctic or the equatorial regions, while in Africa and Asia the very black natives are found near the equator."—*Phrenological Journal.*

— The American Geographical and Statistical Society was incorporated by the State of New-York, in 1854. Its object is the advancement of geographical and statistical science by the collection and diffusion of these branches of knowledge ; and although in its infancy it has already taken rank as a useful and efficient institution. Among its members are many gentlemen of high scientific and literary attainments, both in New-York city, where its rooms are located, and elsewhere, and it has for its honorary and corresponding members gentlemen, both in this country and abroad, of the first literary and scientific excellence. The Society has on foot at present the following measures, among others :

A collection of standard and authentic maps and books relating to geography and statistics, to be kept for public use under proper regulations. This collection now numbers over 10,000 volumes.

The holding of meetings, monthly (July, August, and September excepted), for the reading of valuable papers, with scientific discussions, personal narrations of explorers, travellers, etc. These meetings are open and free to the pubilc, and the proceedings of the Society therein are published to the world. Interesting matter relating to the subjects comprehended by the association is solicited from all parts of the globe. Another object is the origination and assistance in explorations of undescribed regions and in voyages of discovery.

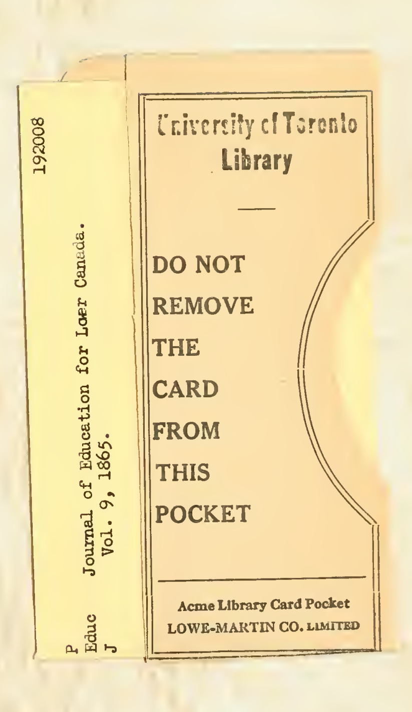
Valuable contributions to the library and funds of the Society have been received from time to time, from and through the different departments at Washington, and the department of State has shown a special interest in its welfare by recommending it to the notice of foreign powers and the foreign agents of the government.

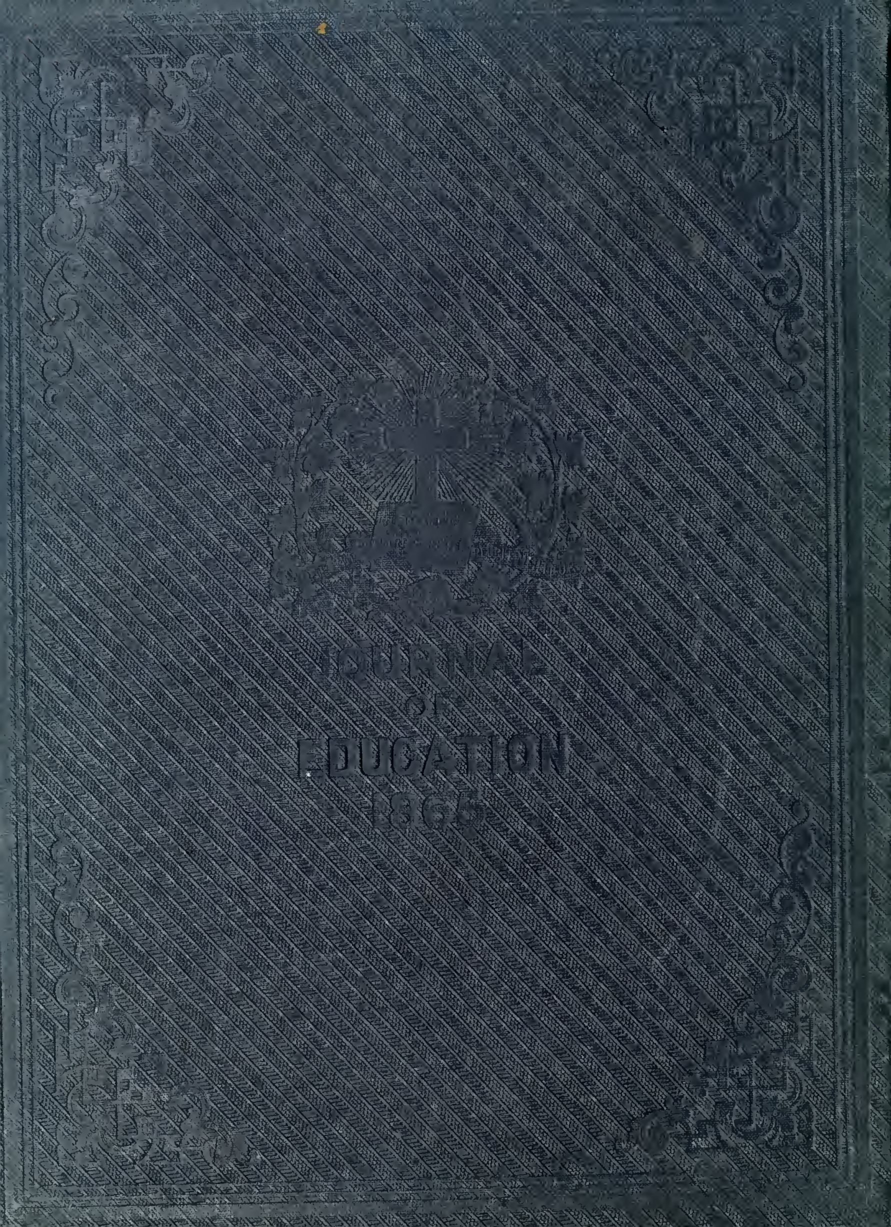
The Society is now seeking to raise a fund of $10,000, by subscriptions, with which they contemplate taking suitable rooms, and fitting them up properly as a library, where will be afforded to all the privilege of consulting its books and maps. The Society has also in view the establishment of a permanent fund of $100,000, to be raised in the same manner, the income of which is to be applied to the extension of geographical and statistical information, and the carrying into practical effect any undertaking which may be considered worthy of accomplishment.

It is hoped that the amount, $10,000, will be speedily made up, and the laudable purpose of the Society in opening their extensive and valuable collection of books, maps, and other geographical matter to the public be carried into effect without delay.

Gentlemen of means now have an opportunity of subscribing to the library project, and may soon have the opportunity to enroll themselves as patrons of the permanent fund, as the subscriptions therefor will ere long be opened.—*Ib.*

EUSÈBE SENÉCAL, *Caloric Printing Presses*, 10, *St. Vincent Street, Montreal*


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